

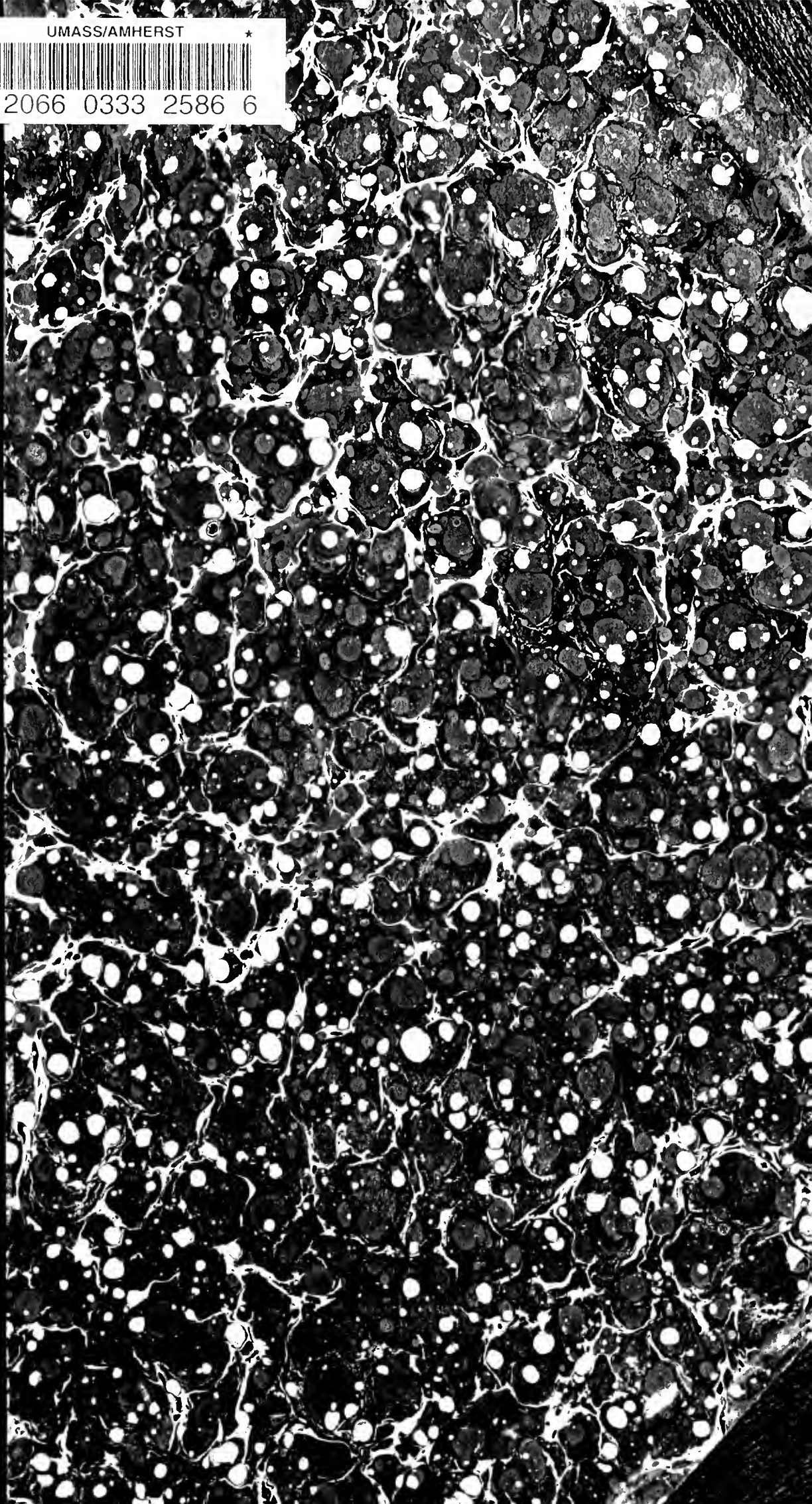
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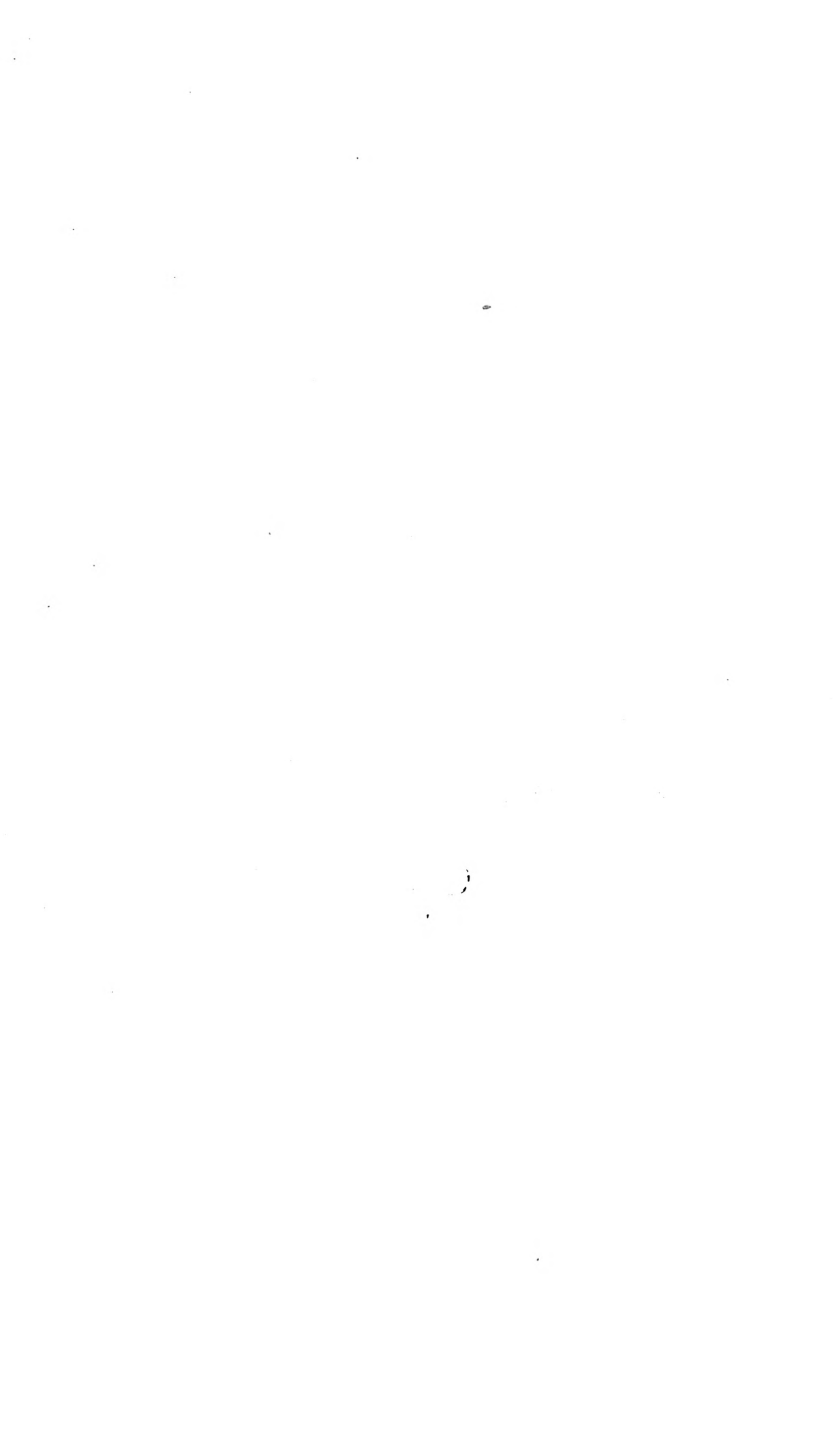
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MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF MAY, 1893.

ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

BOSTON:  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1893.

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## CROP REPORT FOR THE MONTH OF MAY, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., June 1, 1893.

This bulletin begins the series of monthly Crop Reports for 1893, and it is expected that six numbers will be issued during the season. They will be made up largely as in past seasons, and will be mailed free to any person desiring them. As in past years, the table and synopsis of Massachusetts weather will be furnished by the New England Weather Service. Arrangements have also been made with the Director of the Service whereby crop reports covering conditions in the whole of New England will be mailed Tuesdays of each week to those receiving our regular monthly bulletins. Persons not receiving bulletins regularly will confer a favor by reporting the fact to this office.

Report No. 103 (April, 1893) of the Statistician of the United States Department of Agriculture makes the average condition of winter wheat on the 1st of April 77.4, against 81.2 last year. Seeding was late in the Ohio and Mississippi valleys, because of widely prevalent drought. In the Atlantic, Middle, Southern and Pacific States seeding conditions were favorable. The general average of rye is 85.7. For horses the average sanitary condition for the whole country is 97.5. The ratio of losses for the country at large is 1.7 per cent, against 1.5 last year. The number of horses in Massachusetts on farms is given as 65,109; losses 1,432, or 2.2 per cent. The condition of cattle averages 94.7, as against 93.2 a year ago, 95.0 in 1891 and 94.1 in 1890. The lowest figures are found in portions of the plateau region of the West, where the pasturage of overstocked ranges has been shortened by drought. The average loss from winter exposure is 1.7, as against 1.3 per cent a year ago, 1.5 per cent in 1891 and 2.3 per cent in 1890, while the loss from all causes is 3.4 per cent. The condition as regards healthfulness is generally very good. The number of milch

cows, oxen and other cattle in Massachusetts is given as 274,697; losses 5,219, or 1.9 per cent. The average condition of sheep is lower than for the last two years, but higher than at the same date in 1890. The losses from winter exposure amount, on a general average, to 2 per cent, as against 1.4 per cent a year ago and 1.7 per cent in April, 1891. The losses from all causes amount to an average of 4.4 per cent, as against 3.3 per cent in 1892. No disease has been exceptionally general in its prevalence. The number of sheep in Massachusetts is given as 53,032; losses 1,220, or 2.3 per cent. The general average of condition of swine is 96.4, the highest figure for several years. The average of losses is somewhat larger than a year ago, but smaller than in 1891 or 1890. The percentage of losses has been highest in the South. The general conclusion that seems to be fairly deducible from the returns is, that sows which have arrived at the best age for breeding purposes are unusually scarce this season in many of the principal hog-breeding States. The number of hogs in Massachusetts is given as 65,871; losses 1,515, or 2.3 per cent. The condition of the different classes of farm animals, as reported from Massachusetts, is: horses, 99; cattle, 99; sheep, 100; swine, 100.

#### METEOROLOGICAL SUMMARY.

##### *January, 1893.*

January, 1893, will long be remembered as a remarkably cold month. The average deficiency was 6°. The highest temperature recorded during the month in Massachusetts was 60°, at Fall River on the 29th, and the lowest —23°, at Middleborough, Plymouth County, on the 17th. The coldest day at Boston was the 11th, the mean temperature being only 4° above zero; the highest daily mean was 34° on the 30th. The only colder months during the past twenty years have been January, 1875, January, 1881, February, 1885, and January, 1888. A decided fall in the temperature occurred on the 10th and 11th at Boston; from 26° at noon on the 10th it fell steadily to 4° below zero at 8 A.M. on the 11th.

The precipitation was about one inch below normal; the greatest deficiency was 2.10 inches, at Cambridge.

The prevailing wind direction was north-west, and the greatest velocity, 88 miles per hour from the south-east, was reported by the observer at Blue Hill, Norfolk County, on the 2d.

*February, 1893.*

February was also below the normal in temperature, the average deficiency for the month being slightly more than a degree. The greatest departure was noted on the southern coast; at Wood's Holl, Barnstable County, the deficiency was  $2.7^{\circ}$ ; in the western part of the State it was nearly normal. The highest temperature was  $57^{\circ}$ , at Lake Cochituate, Middlesex County, on the 15th; the lowest  $-11^{\circ}$ , at Ludlow, Hampden County, on the 21st.

Precipitation was heavy and much above normal; the departure at Waltham was  $+4.84$  inches. The greatest amount recorded was 8.55 inches, at Beverly Farms, Essex County. The snowfall was remarkably heavy, and ranged from 15 inches at Long Plain, Bristol County, to 6 feet 6 inches at Monroe, Franklin County; at the end of the month from 6 inches to 4 feet remained on the ground.

The prevailing winds were from the north-west, and Blue Hill again reported the highest velocity, 72 miles per hour from the north-west on the 20th.

*March, 1893.*

The temperature departure for March was  $-1.5^{\circ}$ ; Amherst records show a deficiency of  $3^{\circ}$ , while at Boston the departure was only  $-0.1^{\circ}$ . The coldest day at Boston was the 5th, with a mean of  $17^{\circ}$ , and the highest daily mean occurred on the 25th, with an average of  $48^{\circ}$ . The highest temperature was  $64^{\circ}$ , at Plymouth on the 24th, and the lowest  $-6^{\circ}$ , at Lake Cochituate on the 3d and at Monroe on the 19th.

The precipitation was below normal; the greatest deficiency,  $-1.82$  inches, was reported by the observer at Mystic Lake, Middlesex County. The snowfall was below normal, and the greatest amount was 18 inches, at Hyannis, Barnstable County.

Prevailing winds were from the north-west, and the greatest velocity was 61 miles per hour from the north-west, at Blue Hill on the 16th.

*April, 1893.*

April, similar to the three preceding months, was below normal in temperature; the average departure was  $-1.5^{\circ}$ , ranging from  $-2^{\circ}$ , at Springfield, to  $-0.2^{\circ}$ , at Boston. The highest temperature throughout New England generally occurred on the 14th;  $78^{\circ}$  was reported by the observers at Somerset and Mansfield, Bristol County, on that date; the lowest recorded was  $11^{\circ}$ , at Monroe on the morning of the 7th. At Blue Hill it was the coldest April since 1888.

The precipitation averaged about normal, but was unevenly distributed; at Amherst the departure was  $+1.32$  inches, and at Cambridge  $-0.93$ . Snow fell in Massachusetts on the 7th and 8th to an average depth of 6 inches, but it remained on the ground scarcely twenty-four hours, except in the forests. The greatest fall reported was 21 inches, at Monroe.

The prevailing winds were from the north-west, and the maximum velocity was 61 miles per hour from the west, at Blue Hill on the 5th.

## TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending May 8.* — Fourth continuous cold week throughout central valleys, including both winter and spring wheat regions and greater portion of cotton region. Temperature for season since March 1 much lower than usual throughout north-west. Large excess of rainfall during week in Gulf States, Middle and South Atlantic States and in New England. Floods continue over low lands in lower Mississippi valley. Rainfall less than usual from Lake region and Ohio valley westward to Rocky Mountains.

*Week ending May 15.* — Most favorable week of season in spring wheat region, and in States of upper Mississippi valleys, in Kansas, Indian Territory and northern Texas. Temperature slightly in excess over central valleys, Lake region and New England. Week slightly cooler than usual from Pennsylvania southward to Florida. Season week to ten days late in most sections. Rainfall of week greater than usual from lower Ohio and lower Missouri valleys

southward to Gulf and thence westward over Texas. Week relatively dry in States on Atlantic coast, in upper Mississippi valley and thence westward to Pacific coast.

*Week ending May 22.* — Week slightly colder than usual in regions east of Mississippi, except along Atlantic coast north of Hatteras, N. C. On Pacific coast and in all regions west of Rocky Mountains week decidedly cool. Light frost occurred in Lake region on the 16th and 19th and in the extreme north-west on the 20th and 22d. Rainfall less than usual over Southern States and central valleys. More than usual amount of rain fell over greater portion of New England, Middle States, northern Rocky Mountain districts and north Pacific coast.

*Week ending May 29.* — Week slightly warmer than usual on South Atlantic coast westward to New Mexico. In New England nearly normal temperature conditions prevailed, while throughout remainder of country week cooler than usual. Frosts occurred in several States on the 23d, 26th, 27th and 28th. Very little rainfall except in central Mississippi, lower Missouri and lower Ohio valleys, and thence south-eastward to Middle and South Atlantic States, where there was more than the usual amount. Also there was an excess in Montana, Wyoming and Utah.

## NEW ENGLAND WEATHER AND CROPS.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending May 8.* — Rain excessive, except in eastern Maine, damaging roads and fields; temperature and sunshine deficient; season cold and backward; frost not all out of ground in north.

*Week ending May 15.* — Light precipitation, except in south-western Maine; mostly clear; temperature about normal, with decided range; three very warm days; fine growing week; trees coming out very fast; farm work is rushing.

*Week ending May 22.* — Rainfall above and sunshine below average; farm work retarded by heavy rains; fruit trees in full bloom, except in extreme north; not much planting done in northern sections.

*Week ending May 29.* — Temperature and sunshine normal; precipitation below normal; favorable weather, and farm work being pushed; a great deal of planting yet to be done; apple blossom below average; pear and peach blossoms full.

### MASSACHUSETTS WEATHER.

#### *Meteorological Data for May, 1893.*

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Cloudy.	Partly Cloudy.	Cloudless.
Adams, .	57.0	89	23	34	9	—	—	N.E	19	2	10
Gt. Barringt'n	55.6	86	23	34	7, 8	5.93	11	—	—	—	—
Springfield, .	58.2	86	23	37	8	5.48	16	—	—	—	—
Amherst, .	55.8	85	11	31	8	4.37	16	W.	12	9	10
Fitchburg, .	55.4	88	23	38	4	8.25	11	W.	14	7	10
Worcester, .	55.6	86	23	38	4	6.95	14	W.	14	10	7
Dudley, .	56.7	89	11	37	4, 7	6.61	9	W.	16	5	10
Frammingham,	56.8	89	23	31	8	6.77	12	—	—	—	—
Concord, .	55.4	90	23	32	8	5.16	12	S.W.	14	9	8
Lowell, .	58.0	94	23	34	7	—	—	S.E.	8	16	7
Boston, .	56.4	88	23	38	4	5.23	14	W.	11	12	8
Taunton, .	57.2	88	12, 21	36	8	4.53	10	S.W.	—	—	—
New Bedfd,	55.0	79	11, 12	38	4	5.06	11	S.W.	5	10	16
Hyannis, .	57.0	79	22	38	7	4.05	10	S.W.	11	7	13
Provincet'n, .	54.4	78	11	41	4	3.08	10	S.W.	11	11	9

#### *Summary.*

*Temperature* (F.). — Monthly mean,  $56.3^{\circ}$ ; highest monthly mean,  $58.2^{\circ}$ , at Springfield; lowest monthly mean,  $54.4^{\circ}$ , at Provincetown; maximum,  $94^{\circ}$ , at Lowell on the 23d; minimum,  $31^{\circ}$ , at Amherst and Frammingham on the 8th; range,  $63^{\circ}$ ; greatest local monthly range,  $60^{\circ}$ , at Lowell; least local monthly range,  $37^{\circ}$ , at Provincetown; greatest daily range,  $43^{\circ}$ , at Amherst on the 11th; least daily range,  $2^{\circ}$ , at Provincetown on the 3d. Average temperature for May at Springfield for twenty-six years,  $59.2^{\circ}$ , average for May, 1893,  $58.2^{\circ}$ ; departure,  $-1.0^{\circ}$ . Average temperature for May at Boston for twenty-three years,  $56.2^{\circ}$ ; average for May, 1893,  $56.4^{\circ}$ ; departure,  $+0.2^{\circ}$ .

*Precipitation.* — Average, 5.50 inches ; greatest, 8.25, at Fitchburg ; least, 3.08, at Provincetown. Average for May at Springfield for forty-six years, 4.17 ; for May, 1893, 5.48 ; departure, +1.31. Average for May at Boston for twenty-three years, 3.57 ; for May, 1893, 5.23 ; departure, +1.66.

*Prevailing Wind Directions.* — South-west and west.

*Thunder-storms.* — 2d, 23d and 27th.

*Auroras.* — Concord, 7th and 8th.

*Frost.* — 7th, 8th and 9th.

*Rainbow.* — Wakefield, 6 P.M., 27th.

### *Remarks.*

At Fitchburg, 2.31 inches of rain fell between the hours of 5 P.M., 16th, and 5 A.M., 17th. At that place apple trees were in full bloom on the 23d, which has been the average date for thirty-seven years.

The temperature for the month of May, 1893, averaged very nearly normal in eastern Massachusetts, and slightly below in western sections. The maximum occurred generally on the 23d, and ranged from 78 to 94 degrees ; the minimum temperature occurred on several dates, but the morning of the 8th was the coldest of the month. Light frosts were reported on the 7th, 8th and 9th, but no damage was done. The precipitation was above normal and heavy in most sections. At Cambridge, 4.18 inches fell on the 3d and 4th ; at Framingham, 3.51 inches on the same date. In fact, more than half the rain during the month fell on the first six days, at most stations. Considerable damage was done by this storm (3d and 4th). A two-masted schooner went down off Plum Island, carrying with her the crew of four men. Bridges and dams were badly damaged in western Massachusetts. No severe thunder-storms occurred during the month.

In the circular to correspondents returnable May 29 the following questions were asked : —

1. How does the present season compare, agriculturally speaking, with last season?

2. How has live stock wintered in your vicinity?

3. What is the condition of the grass roots of pastures and mowings, and has fall seeded grain wintered well in your vicinity?

4. What proportion do the fruit blossoms bear to the bloom of former years?

5. What insects appear to be doing the most damage in your neighborhood, and what measures are being taken to prevent their ravages?

6. Has your town accepted the act of the present Legislature (chapter 78, Acts of 1893), authorizing towns to appropriate money for the extermination of insect pests within the limits of the highways?

7. What wages, with board and without board, are paid farm help in your vicinity?

Returns have been received from one hundred and twenty-seven correspondents, and from these the following summary has been made : —

#### THE SEASON.

Most correspondents state that the season is from one to two weeks later than last year, though several regard it as only a few days later, and a very few consider it to be fully as early. Some speak of it as cold and wet, but the majority state that, aside from its lateness, it will compare favorably with last year. Last year most of the correspondents referred to the season as being either late or backward.

#### LIVE STOCK.

Fully three-fourths of the correspondents refer to live stock as having wintered either well, remarkably well or finely. Most of the others state that it has wintered fairly well, and in only two instances is the condition spoken of as poor. Several correspondents state that the supply of hay ran short, but that the condition of live stock was kept up either by purchasing hay or feeding grain.



## GRASS AND GRAIN.

The returns are practically unanimous in regard to the condition of grass. One speaks of it as poor, one as badly winter-killed, two as fair and four as average. All others speak of it as being in good condition. A few report that pastures are thin, but that mowings are in fine shape. Many correspondents state that no fall seeded grain was sown in their sections. Returns, when made, generally report it to have wintered well, though some consider it to be in only fair condition, and a few state that rye winter-killed badly.

## THE FRUIT BLOOM.

The answers to the fourth question vary so much that it is hard to make a summary, but the general conclusion reached is that the bloom of apple trees was below the average, and that other fruit trees and early berries generally had a very full bloom. In some of the western towns the apple trees were not in bloom at the time of making returns. Many correspondents state that Baldwin apples failed to bloom, though other varieties had either a fair or good bloom.

## INSECTS.

Most of the correspondents report that very few tent caterpillars have been observed as yet, some going so far as to say that there are practically none. Of the methods for keeping them in check, hand-gathering and burning with a torch seem the most common, though many of the more advanced farmers have begun to spray their orchards with Paris green. Other insects mentioned are the potato beetle, the asparagus beetle, currant worms, wire worms, cut worms and cranberry fire worms, but none of these appear to be as prevalent as usual. It is thought that the cold, wet spring has done much toward keeping all kinds of insects in check.

## FARM HELP AND WAGES.

The prices paid farm help, with board, range from \$10 per month for green immigrant help to \$35 and even \$40 for experienced American help. The general average would appear to be about \$20 per month. These figures are lower

than those given for several years past, as the question concerning farm help includes all grades, instead of referring only to good or first-class help, as heretofore. Very little farm help is hired by the month without board, but where this is the case the average wage paid is about \$35. From \$8 to \$12 per month is allowed for board. For day help \$1.50 per day appears to be the ruling price, though in some cases \$1.25 is paid, and in others the price runs as high as \$2 per day. Many correspondents report that it is difficult and even impossible to obtain good farm help.

### SUPPRESSION OF INSECT PESTS.

Question No. 6 was introduced for the purpose of calling attention to an act of the present Legislature (chapter 78, Acts of 1893) for the suppression of insect pests. No town has as yet availed itself of the act, although in three towns prizes have been offered to the school children, either by horticultural or village improvement societies or by individuals, for the largest collection of the egg clusters of the tent caterpillar, and in two others provision has been made for the cutting of wild cherry trees within the limits of the highways. The full text of the above-mentioned act is given below : —

#### AN ACT TO PROVIDE FOR THE EXTERMINATION OF INSECT PESTS.

*Be it enacted, etc., as follows :*

SECTION 1. Cities and towns shall raise annually by taxation and appropriate such a sum of money as they may deem necessary, to be expended under the direction of the mayor and aldermen in cities and the selectmen in towns in exterminating insect pests within the limits of the highways in their respective cities and towns, and in the removal from said highways of all trees and shrubs upon which such pests naturally breed : *provided, however,* that where the owner or lessee of real estate abutting on the highway shall annually exterminate all insect pests from the trees and shrubs along the highway where said real estate abuts thereon, such trees and shrubs shall be exempt from the provisions of this act.

SECT. 2. This act shall take effect in any city when accepted by the city council, and in any town when accepted at a legal town meeting called for that purpose. [*Approved March 9, 1893.*]

## NOTES OF CORRESPONDENTS.

(Returned to us May 29.)

## BERKSHIRE COUNTY.

*Sheffield* (DWIGHT ANDREWS). — Season very late, but promising. Live stock wintered well. Grass roots of pastures and mowings in very good condition, and fall seeded grain has wintered well. Fruit blossoms about three-fourths the bloom of former years. Tent caterpillars have begun to appear, and are being checked somewhat by hand-picking. Farm help receives from \$18 to \$22 per month with board, and from \$26 to \$28 without board.

*Monterey* (WM. S. BIDWELL). — Season later than last year, and planting not all done yet. Live stock wintered fairly well. Grain looks well, except on very wet land. Very few fruit trees are in full bloom, but the indications point to an average bloom. Farm help is paid from \$16 to \$20 per month with board; about \$8 per month is allowed for board.

*Becket* (WM. H. SNOW). — The present season compares very favorably with last season, but is fully as late. Stock has wintered well, considering the length and severity of the winter. Grass is looking finely. Fruit trees are not yet in bloom, but promise to blossom as fully as usual. The potato beetle, tent caterpillar and currant worm are the only insects, and there is no concerted effort toward extermination. Good farm help commands \$20 per month with board, and \$32 without board.

*Richmond* (O. F. SMITH). — The season is two weeks late. Live stock wintered well, and is looking nicely. Grass is in good condition, and fall seeded grain wintered well. The fruit bloom is about seventy-five per cent of an average. The tent caterpillar is our most injurious insect, and nothing is being done to check it. Planting is nearly completed, with the exception of corn planting. Farm help is paid \$20 per month with board, and \$32 without board.

*Cheshire* (L. J. NORTON). — Everything except grass is two weeks later than usual. Live stock has wintered as well as usual, though hay is now nearly gone. Grass winter-killed somewhat

where ice formed. Fruit trees blossomed fully up to the average. No insects have as yet appeared. Farm help is paid \$25 per month with board, and from \$12 to \$15 in addition without board.

*Williamstown* (S. A. HICKOX). — The present season compares favorably with last season, although it is about ten days late. Planting is now nearly done. Grass is looking finely, and fall seeded grain is in fair condition. Fruit trees have blossomed exceedingly full. Tent caterpillars are doing the most damage of any insects, and nothing is being done to check them. Farm help is paid from \$15 to \$26 per month with board, and \$1.25 per day without board.

#### FRANKLIN COUNTY.

*Charlemont* (H. S. GILES). — The season is as good or better than last year. Live stock is looking nicely. Grass in mowing and pastures is in good condition, and fall seeded grain wintered well. Fruit trees had from one-half to two-thirds of an average bloom. Tent caterpillars promise to become quite numerous if no measures are taken to destroy them. Foreign farm help is paid from \$11 to \$15 and American \$20 per month with board; the price without board is \$1.50 per day.

*Colrain* (A. A. SMITH). — The season is two weeks later than last year. Live stock wintered very well, considering the severity of the winter and the lack of water. More than the usual amount of grass winter-killed. The fruit bloom is a full average. Tent caterpillars are the only insects as yet, and they are being burned as fast as they appear. Farm help is very hard to obtain.

*Conway* (J. C. NEWHALL). — The season is nearly two weeks later than last year, and very cool and wet. Stock has wintered fairly well, though many have been short of hay. Grass is in good condition, and grain and fall seeding are looking very well. Apples have hardly bloomed as yet; other fruits are above the average. Very few tent caterpillar nests are to be seen. Good, reliable help is hard to get, and commands from \$15 to \$30 per month with board.

*Sunderland* (J. M. J. LEGATE). — The season is perhaps a little later than last year, but is otherwise more favorable. Tobacco beds not under glass are a few days late. Live stock wintered very well. Grass is in first-class condition, and fall seeded grain wintered well. Fruit trees blossomed very heavily. Few insects have made their appearance, and nothing is being done against them. Farm help is paid from \$18 to \$25 with board.

*Northfield* (CHARLES POMEROY). — The season is some ten days later than last year. Live stock is not quite in average condition,

owing to the long winter. Grass is late but looking well, and grain wintered fairly well. Pear trees blossomed very full, but grafted apple trees had few blossoms. Foreign farm help is paid \$10 and American \$25 per month with board; without board, \$1.50 per day is paid.

*New Salem* (DANIEL BALLARD). — The general outlook is quite as favorable as last year, though the season is backward. Live stock wintered well. Grass is generally in good condition, and grain wintered well. Fruit trees bloomed quite fully. Tent caterpillars are the only insects to appear, and are being fought by individuals. Farm help is paid from \$18 to \$25 per month, and \$1.25 to \$1.50 per day, without board.

#### HAMPSHIRE COUNTY.

*Greenwich* (WM. S. DOUGLAS). — The season is much later than last year. Stock has wintered fairly well. Grass looks quite well, and grain has wintered fairly well. The fruit bloom is much less than that of former years. The maximum price paid farm help is \$25 per month with board.

*Belchertown* (H. C. WEST). — The season is a few days later than last year, but is more moist and growing. Live stock wintered extremely well. Grass has rarely looked better; very little grass or grain winter-killed. Fruit blooms far above the average. Few insects have appeared, and nothing is being done. Farm help receives from \$12 to \$22 per month with board.

*Amherst* (WM. P. BROOKS). — The season is ten days late. Live stock wintered well. Pastures and mowings in good condition, but rye winter-killed somewhat. Bloom of all kinds of fruit trees very abundant. No insects are especially noticeable. Farm help is rather scarce, and receives from \$20 to \$22 with board, and from \$39 to \$45 without board.

*South Hadley* (H. W. GAYLORD). — Season about two weeks later than last year. Live stock wintered finely. Fall seeding and manured mowings are looking finely, but old mowings and pastures are looking rather poorly, the grass not starting as well as usual. Fruit trees blossomed fully. The tent caterpillar is our most injurious insect, but much is being done towards its extermination. Farm help is paid \$18 to \$22 per month with board, and \$1.50 per day without board.

*Northampton* (D. A. HORROX). — The season is ten days later than last year. Live stock wintered fairly well. Grass and winter grain look well. The fruit bloom is a third greater than last year, especially for apples. Few insects have been seen. Good farm help is scarce, and poor foreign help asks from \$18 to \$23 per month and board.

*Chesterfield* (HORATIO BISBEE).—The season compares well with last year, although much later. Stock has wintered well. Grass roots are in good condition. Fruit trees have not yet blossomed fully, but promise a good bloom. Tent caterpillars have appeared, but are not numerous. Farm help is paid \$20 per month with board, and \$1.50 per day without board.

#### HAMPDEN COUNTY.

*Blandford* (E. W. BOISE).—Season fully two weeks late, but otherwise about the same as last year. Stock wintered well, above the average. Grass looks extra well, and very little was winter-killed. Fruit trees and early berries had a very full bloom. Tent caterpillars are doing a little damage, but are kept down by hand-picking. Prices for farm products during the past winter have ruled high, and still continue well up. More farm work would be done if help were not so scarce and high; \$20 to \$25 is paid per month with board, and from \$1.50 to \$1.75 per day without board.

*Westfield* (C. F. FOWLER).—The season is a little late, but all seeds have germinated well. Live stock has wintered better than usual. Grass looks unusually well, but new seeded land winter-killed somewhat in low places. The fruit bloom has been a little more than an average. The tent caterpillar has appeared, but is being attended to. Farm help is paid \$20 to \$30 per month with board, and \$1.50 to \$1.75 per day without board.

*West Springfield* (J. N. BAGG).—The season is backward, but otherwise compares favorably with last year. Live stock, with the exception of swine, wintered well. Spring ploughing is not yet completed. Grass is in good condition. The fruit bloom is not quite an average. Tent caterpillars have appeared, but are not as common as in some years; they are generally destroyed by burning. Good farm help is hard to get, at prices ranging from \$1 to \$1.50 per day without board.

*Chicopee* (R. W. BEMIS).—The deep frost in the ground and the wet spring have made planting backward. Stock wintered about as usual. Grass is in good condition, and fall seeded grain wintered well. Greening apple trees have blossomed full this season. Potato bugs, currant worms and tent caterpillars have appeared, and the usual remedies are being applied. Farm help is paid from \$6 to \$10 per week.

*Wilbraham* (H. M. BLISS).—The season is backward, cold and wet. Live stock wintered well, but hay is scarce. Grass is in good condition, but fall seeded grain winter-killed somewhat. The fruit bloom is a full average, except that of Baldwin apples.

Tent caterpillars have appeared, and no measures are taken against them. Farm help is paid \$10 to \$18 per month with board, and \$1.25 per day without board.

*Brimfield* (S. W. BROWN). — Season two weeks later than last year, also cold and wet. But very little corn planted yet. Live stock wintered well. Grass is in good condition. The fruit bloom is a full average. A few tent caterpillars are the only insects as yet. Farm help is paid \$25 per month with board, and from 15 to 20 cents per hour without board.

#### WORCESTER COUNTY.

*Warren* (WM. E. PATRICK). — The season is more backward than last year. Live stock wintered fairly well, though many were short of hay. Grass roots are dead in many pastures, but in good condition in mowings. Fall seeded grain wintered fairly well. Apples had a very light bloom, other fruit trees a full bloom. The tent caterpillars are doing the most damage, but they are not as plenty as last season. The village improvement society offers the children a reward for every nest brought in. Very little farm help is to be had at any price.

*Douglas* (T. M. POTTER). — The season is later than last year, but the prospect is better, agriculturally speaking. Live stock wintered very well. Pastures never looked better, and fall seeded grain has wintered well. Apples are not a full bloom, but pears, plums and peaches are fully up to the average. Tent caterpillars are doing the most damage, and nothing is being done to check them. Farm help is paid from \$20 to \$24 per month with board, and \$1.50 per day without board.

*Worcester* (S. A. BURGESS). — The season is about a week late, but on the whole quite as favorable as last year. Live stock in first-rate condition. Grass in remarkably good condition, and fall seeded grain wintered well. Fruit blossomed fully up to the average. Tent caterpillars and currant worms are doing the most damage of any insects, and are being fought by crushing and spraying. Farm help is paid \$25 per month with board, and \$1.50 per day without board.

*Spencer* (H. H. KINGSBURY). — The season is much later than last year in regard to planting. Considering the unusual severity of the winter, stock has wintered well. Grass in pastures and mowings a fine stand, but late. The bloom of pears is above the average, apples below, peaches and cherries a fair average. Only a few tent caterpillars are to be found, and little is done to check them. Farm help is paid \$20 per month with board, and \$1.50 to \$1.75 per day without board.

*Oakham* (JESSE ALLEN). — The present season compares favorably with last season. Live stock wintered well. Grass roots are in good condition, and fall seeded grain wintered well. Apple bloom is very light, and that of pears very full. A few tent caterpillars have appeared, and will be destroyed by individual owners. Farm help is paid from \$15 to \$25 per month with board, and from \$25 to \$35 without board.

*Barre* (J. L. SMITH). — The season is about two weeks later than last year, but is catching up very fast. Live stock has not wintered as well as usual, on account of the short supply of hay in this vicinity. Grass is badly winter-killed, especially in the pastures. Apples and pears have a full bloom. No insects have appeared as yet. Farm help is scarce at from \$20 to \$25 per month with board.

*Winchendon* (W. H. SAWYER). — Season ten days later than last year. Live stock wintered very well. Grass is late, but is looking well. Fruit trees have not yet blossomed. Farm help is paid \$20 per month with board.

*Fitchburg* (Dr. JABEZ FISHER). — The date of apple bloom was May 23, which has been the average for thirty-seven years; date last year May 25. Live stock wintered well. Grass and fall seeded grain in good condition. Pear bloom very abundant; apple bloom nearly or quite equal to last year. Tent caterpillars are moderately prevalent, and are let pretty much alone. Farm help is paid from \$20 to \$25 per month with board, and \$1.50 per day without board. Upward of seven inches of rain fell in the first half of the month, which prevented the early working of the land, but has been good for grass and trees.

*Leominster* (W. B. HOSMER). — The present season compares favorably with last season. Live stock wintered well. Pasture and mowing lands are looking better than last year at this time, and are in fine shape. Winter apples had a light bloom, but pears and peaches blossomed fully. Tent caterpillars and some canker worms have appeared; hand-picking and spraying are the common methods used against them. Good farm help is hard to get at from \$25 to \$40 per month.

*Bolton* (H. E. BABCOCK). — The season is two or three weeks behind last season. Stock has generally wintered well. Grass and fall seeded grain is looking well. Few insects have appeared as yet, because of the late season. Farm help is paid \$20 per month with board, and \$35 to \$38 without board. It is nearly impossible to get good farm help in this vicinity.

*Berlin* (P. B. SOUTHWICK). — The season is about two weeks late, but grass is looking finely and is quite forward. Fall seeded



grain wintered well. Live stock wintered very well. Fruit trees have about seventy-five per cent of an average bloom, with the exception of Baldwin apples, which have not blossomed at all. Tent caterpillars and asparagus beetles are doing the most damage. Farm help is paid \$20 per month with board, and \$1.50 per day without board.

#### MIDDLESEX COUNTY.

*Groton* (DANIEL NEEDHAM). — The season is very backward, owing to eight inches of rain having fallen during the month. Live stock has wintered well. Grass is in excellent condition, and fall seeded grain wintered well. The fruit bloom was fully fifty per cent below an average, and very few Baldwin apples have blossomed. Tent caterpillars have appeared, but are not as numerous as last year; the highway surveyors were instructed to destroy them on all the highways. Farm help is paid \$30 per month with board, and \$40 without board.

*Billerica* (J. N. PARDEE). — The season is fully as early and warmer than the average, and the springs are fuller. Live stock wintered well. Grass is in good condition, being ahead of last year at this time, and all fall seeding has wintered well. The apple bloom is from ten to twenty-five per cent of a full bloom, while all other fruit trees are fully one hundred per cent. Tent caterpillars are doing the most damage, the usual remedies being applications of kerosene and spraying with Paris green. Farm help is paid \$12 to \$20 per month with board, and from \$30 to \$40 without board.

*Concord* (WM. H. HUNT). — The season is late and cold. Stock wintered as well as usual. Grass in mowings and pastures is in good condition. Tent caterpillars are not so abundant as last year, but the asparagus beetle is about the same. The average price paid farm help is about \$20.

*Marlborough* (E. D. HOWE). — The season is two weeks later than last year. The condition of live stock shows evidence of a scarcity of hay. Grass is in good condition, and fall seeded grain wintered fairly well, though some has been drowned out this spring. Caterpillars and canker worms are our most injurious insects, and are kept in check by spraying and hand-picking. Farm help is paid \$25 per month with board, and \$1.75 per day without board.

*Sherborn* (N. B. DOUGLAS). — The season is more backward than last year, otherwise the outlook is about the same. Live stock is looking better than usual. Grass has wintered well. All fruits except Baldwin apples and crab-apples have blossomed fully.

Tent caterpillars are doing the most damage, and most fruit growers are spraying. Farm help is paid from \$20 to \$25 per month with board, and from \$1.50 to \$1.75 per day without board. Good help is hard to obtain, most farm laborers being ignorant and incompetent.

*Newton* (OTIS PETTEE). — The season compares favorably with last season, but is from ten to twelve days later. Live stock wintered very well. Grass is in good condition. Cherries and pears blossomed fully, but apples were rather below the average in bloom. Tent caterpillars are doing the most damage; children are employed by the Newton Horticultural Society to destroy them, and are doing good work.

#### ESSEX COUNTY.

*Marblehead* (WM. S. PHILLIPS, Jr.). — The season is three weeks late. Live stock wintered as well as usual. All grass lands promise excellent results. The fruit bloom has been less than twenty per cent of last year. Tent caterpillars have appeared, and a few have been destroyed by burning. Farm help is paid \$20 to \$25 per month with board, and \$1.50 per day without board.

*Danvers* (C. H. PRESTON). — The season is later than last year. Live stock wintered well. Grass of all kinds looks well. There is a small bloom of apples, Baldwins being not more than one-fourth of a full bloom. Tent caterpillars are doing the most damage, and many are spraying their trees with Paris green. Farm help is paid from \$20 to \$25 per month with board, and from \$36 to \$40 without board.

*North Andover* (PETER HOLT, Jr.). — The season is late and cold. Milch cows generally look well, but owing to the short supply of hay some stock wintered poorly. Grass is in good condition, and fall seeded grain wintered well. Greening apples bloomed fairly well, but Baldwins and early apples had very few blossoms. The tent caterpillar has appeared; prizes were offered the children to collect the eggs, and many thousands were collected. Farm help is paid from \$20 to \$25 per month with board, and \$1.50 per day without board.

*Rowley* (T. P. HALE). — The season is about twelve days later than last year. Live stock has wintered well. Pastures are short, and some grass has winter-killed. Pears bloomed well; other fruits are late and have not yet bloomed. Tent caterpillars are doing the most damage, and many are taking advantage of the cold spring to exterminate them. Farm help receives \$1.50 per day and from \$20 to \$25 per month with board.

*Groveland* (ABEL STICKNEY). — The season is about ten days later than last year, with the exception of grass. Live stock wintered uncommonly well. Pastures and mowings are looking finely. Apples have not half an average bloom, but other fruit trees have a full bloom. Tent caterpillars are doing the most damage, and are checked by hand-picking. On account of rain, planting has been much delayed and there is much work to be done. Farm help is paid from \$20 to \$25 per month with board, and \$1.50 to \$2 per day without board.

#### NORFOLK COUNTY.

*Medway* (M. MORSE). — The season is from seven to ten days late. It is better for grass than last year, but not so favorable for planted crops. Live stock wintered all right. Grass is in good condition. Fruit trees had nearly a full bloom. Farm help is paid from \$16 to \$22 per month with board, and \$1.50 per day without board.

*Franklin* (C. M. ALLEN). — The outlook for the season is hopeful. Stock wintered as well as usual. Grass is in better condition than usual. Apples had less and peaches more than an average bloom. Tent caterpillars have appeared, and but little is done to check them. Farm help is paid from \$15 to \$25 per month with board, and from \$35 to \$45 without board.

*Medfield* (GEO. R. CHASE). — The present season is later than last year. Stock wintered in first-rate condition. Grass has started well, and fall seeded grain wintered well. Apple bloom rather below the average, but pears fully up to the average. There is not one tent caterpillar's nest this year to twenty last year at this time. Help is very scarce and high, and also terribly incompetent and untrained; \$20 to \$30 is paid per month with board, and \$1.75 to \$2 per day without board. Oats and peas are growing in favor and acreage as a fodder crop.

*Cohasset* (E. E. ELLMS). — The season is more favorable than last year. Stock wintered very well. Grass roots in pastures and mowings are in good condition. The fruit bloom is about one-fourth of an average. The tent caterpillar has appeared. Farm help is paid \$25 per month with board, and \$40 without board.

#### BRISTOL COUNTY.

*Attleborough* (ISAAC ALGER). — The season is about the same as last year. Live stock wintered well. Grass and fall seeded grain is in good condition. The fruit bloom was twice as full as last year. The tent caterpillars are the only insect to appear as yet,

and they have been much checked by birds. Farm help is paid \$20 per month with board, and from \$35 to \$40 without board.

*Raynham* (N. W. SHAW). — The season is more backward than at this date last year. Live stock wintered in better shape than usual. Grass and fall seeded grain are in average condition. Fruit bloomed fully as heavily as usual, with the exception of Baldwin apples. Currant worms and the asparagus beetle are doing the most damage, and hellebore is freely used. The spring has been wet, and many seeds failed to germinate. Farm help receives \$1.50 per day without board.

*Dighton* (A. W. PAUL). — Season later, but quite as promising as last year. Live stock wintered fairly well. Pastures and mowings are unusually promising. Apples and peaches had a very light bloom, and pears an average one. Few insects have appeared as yet; tent caterpillars were never so scarce. Farm help is paid \$20 to \$25 per month with board, and \$1.50 per day without board.

*Dartmouth* (L. T. DAVIS). — Planting, especially of potatoes, has been much retarded. Stock wintered well as a rule. Grass is in good condition, that on the best meadows being exceptionally good. The fruit bloom is about one-half of an average. Insects have not yet been at all destructive. Farm help is paid \$15 to \$25 per month with board, and \$1.50 per day without board.

*Fairhaven* (F. C. LYON). — The season is two weeks late with all crops except grass and grain. Live stock wintered well. Pastures are in good condition, the indications for the hay crop are good and fall seeded grain wintered well. The fruit bloom is a fair average. The tent caterpillar has appeared, as usual. Farm help is paid from \$15 to \$20 per month with board, and \$1.50 per day without board.

#### PLYMOUTH COUNTY.

*Marshfield* (G. J. PETERSON). — Grass and pastures look better than at this date last season. Live stock wintered very well. Fall seeded grain looks better than usual. Fruit trees blossomed fully up to the average. But few insects have yet appeared. All seed came slow, and corn will be planted a few days late. Farm help is paid from \$18 to \$30 per month with board.

*Hanson* (F. S. THOMAS, M.D.). — The season is a good one, but late. Live stock wintered well. Grass in good average condition. The fruit bloom a fair average, while some orchards are very full. Insects are doing no appreciable damage. Farm help is paid \$1.50 per day with board.

*West Bridgewater* (F. E. HOWARD). — The season is a little later than last year, and a little cooler. Live stock has wintered

well. Grass is in good condition, and fall seeded grain has wintered well. Fruit trees have an average bloom, perhaps greater than last year. Currant worms are doing the most damage of any insects; hellebore and coal ashes are used as preventives. Few tent caterpillars are yet to be seen. Corn is not all planted. Farm help receives from \$15 to \$30 per month with board, and from \$1.50 to \$2 per day without board.

*Kingston* (JAS. H. CUSHMAN). — The season is fully as good as last year, but is late. Live stock is looking nicely. Pastures are looking excellently, and mowing land was never in better condition. Fruit blossomed about as in former years. There is no complaint of any insect but the potato beetle. There is very little help to be had with board; without board, wages are \$1.50 per day.

*Lakeville* (ELBRIDGE CUSHMAN). — The season is fully up to the average. Live stock wintered well, milk has brought fair prices and dairy stock is looking well. Grass is very good, and rye in fine condition. Pears blossomed well, and apples about seventy-five per cent of an average bloom. Fruit trees are remarkably free from insects. Good help commands \$20 with board, and \$35 without board.

*Wareham* (A. SAVARY). — The season is about two weeks late, otherwise it compares favorably with last year. Live stock has wintered very well. Grass is very forward, and has wintered well. There has been about an average bloom for large fruits, while small fruits have had a fuller bloom than usual. Cut worms are doing the most damage of any insects. There are fewer tent caterpillars than last year. Farm help is scarce at \$1.50 per day.

#### BARNSTABLE COUNTY.

*Sandwich* (J. R. HOLWAY). — The season is later than last year. Stock wintered better than usual. Pastures are in average condition, but winter grain is below the average. The fruit bloom is one-half greater than usual. Fire worms are very plenty, and are being fought by flowing the bogs and with Paris green.

*Barnstable* (JOHN BURSLEY). — The season is later than last year. Live stock has wintered as well as usual. Grass roots suffered badly in last year's drought, and are not starting very thickly. Fruit blossomed equal to 1891, and double the bloom of 1892. Tent caterpillars are attacking the apple trees and the fire worm the cranberry vines, and they are being sprayed with Paris green and tobacco. Farm help is paid \$20 per month with board, and from \$1.50 to \$1.65 per day without board.

*Dennis* (JOSHUA CROWELL). — The season is very cold and backward. Live stock is now in average condition. Grass is in

very good condition, and fall seeded grain wintered well. Apples blossomed less than last year, and pears are a good average. Cranberry vines are looking well, but are yet in great danger from frost. Gardens will be late. Tent caterpillars and cranberry fire worms are doing the most damage of any insects. Farm help is paid \$20 to \$25 per month with board, and \$1.50 per day without board.

*Eastham* (J. A. CLARK). — The season is ten days later than last year. Live stock wintered as well as usual. Grass is in good condition. All fruit trees are full of bloom. The damage from insects is not large as yet. Farm help is paid \$20 to \$30 per month with board, and from \$1.50 to \$2 per day without board.

#### DUKES COUNTY.

*West Tisbury* (WM. J. ROTCH). — The season is about ten days later than last year. Live stock is not up to the average in spring condition, owing to the scarcity of hay. Pasturage is late, but is improving rapidly; fall seeded grain wintered fairly well. There has been an average fruit bloom. Insects are doing very little damage so far. Farm help is generally obtainable at \$1.50 per day without board; by the month with board the help are mostly Portuguese at from \$20 to \$25.

#### NANTUCKET COUNTY.

*Nantucket* (CHAS. W. GARDNER). — The season is very cold, and nearly three weeks later than that of 1892. Most live stock wintered well. Grass on new lands is looking finely, though backward. Potato bugs and tent caterpillars have appeared, and are being fought by individuals. Farm help is paid \$16 to \$30 per month with board, and \$1.50 per day without board.

## NUMBERS AND VALUES OF FARM ANIMALS ON FARMS AND RANCHES, JANUARY, 1893.

It is thought that the following items, gleaned from a recent report of the Statistician of the United States Department of Agriculture, will be of interest to readers of the bulletin.

The aggregate value of farm animals is greater than a year ago, notwithstanding the reduced numbers, being \$2,483,083,249, instead of \$2,461,755,678, an increase of \$21,327,571. Notwithstanding a reduction in number of swine of 12 per cent, the aggregate value is increased \$9,787,994.

### *Horses.*

Generally speaking, the interest in horse-breeding continues, and numbers are increasing. The increase in the supply has been attended by a reduction in their average price of \$3.75 per head, while the decline in the value of mules has been \$4.87. The estimated number of horses on farms and ranches is 16,206,802; average price, \$61.22; value, \$992,225,185. The estimated number in Massachusetts is 65,109 (the number assessed May 1, 1892, was 185,113); average price, \$102.18; value, \$6,652,559. The estimated price of horses in Massachusetts under one year old is \$38; between one and two years old, \$58.75; between two and three years old, \$86.25; and over three years old, \$110. In number Illinois leads, with 1,377,654; followed by Iowa, with 1,353,791; Texas, with 1,246,205; and Kansas, with 1,000,594. In average price Massachusetts leads, with \$102.18 (including prices of carriage and team horses would increase this); followed by Rhode Island, with \$100.74; and Connecticut, with \$100.25 the lowest being \$23.31, in New Mexico. In total value Illinois leads, with \$89,582,790; followed by Iowa, with \$83,041,533; Ohio, with \$61,253,716; and New York, with \$56,403,020. The estimated number of mules is 2,331,128; average price, \$70.68; value, \$164,763,751.

*Milch Cows.*

There appears but little change in numbers of milch cows. There is less fluctuation in this class of farm animals than in any other, as the milk supply must be kept up. A steady increase has been apparent in the past, which will continue as population advances. There is a decrease in the number of store cattle. The estimated number of milch cows on farms and ranches is 16,424,087; average price, \$21.75; value, \$357,299,785. The estimated number in Massachusetts is 181,770 (the number assessed May 1, 1892, was 194,980); average price, \$33; value, \$5,998,410. In number New York leads, with 1,556,874; followed by Iowa, with 1,291,142; and Illinois, with 1,093,812. In average price New Jersey leads, with \$35.50; followed by Washington and Massachusetts, with \$33; and Rhode Island, Wyoming and Nevada, with \$30; the lowest being \$11.50, in Arkansas. In total value New York leads, with \$41,039,199; followed by Iowa, with \$27,113,982; Illinois, with \$25,157,676; and Pennsylvania, with \$24,163,337. The estimated number of oxen and other cattle in the United States is 35,954,196; average price, \$15.24; value, \$547,882,204. The number of neat cattle, other than cows, in Massachusetts, assessed May 1, 1892, was 54,837. The number of fowl assessed was 799,390, valued at \$331,820.

*Sheep.*

The increase in numbers of sheep continues, as a result of a progressive advance in prices for four years past, being, as estimated, 2,335,188 in the past year. There has been an increase in Virginia and South Carolina, and in the Western States, as a rule. The average farm value of sheep has advanced 39 per cent since 1889. The estimated number of sheep on farms and ranches is 47,273,553; average price, \$2.66; value, \$125,909,264. The number in Massachusetts is 53,032 (the number assessed May 1, 1892, was 47,092); average price, \$4.28; value, \$226,712. In number Ohio leads, with 4,378,725; followed by Texas, with 4,334,551; California, with 4,124,376; New Mexico, with 2,730,082; Montana, with 2,528,098; Michigan, with 2,518,544; Ore-



gon, with 2,456,077 ; and Utah, with 2,117,577. In average price Massachusetts leads, with \$4.28 ; followed by Rhode Island, with \$4.21 ; New Jersey, with \$4.19 ; Connecticut, with \$4.04 ; the lowest being Mississippi, with \$1.49. In value of sheep Ohio leads, with \$13,900,263 ; followed by California, with \$9,559,479 ; Michigan, with \$8,512,679 ; and Texas, with \$6,924,445.

### *Hogs.*

The increase in numbers of swine in 1891 was followed by a heavy misfortune in the reduction of the proportion of young pigs raised. The excessively wet weather of spring caused the loss of an unusual proportion of the natural increase. It was early seen that numbers would be considerably reduced. The increase in the value of swine has been 39 per cent in a single year, the result of a change from apparent plethora to absolute scarcity. The estimated number of hogs on farms and ranches is 46,094,807 ; average price, \$6.41 ; value, \$295,426,492. The estimated number in Massachusetts is 65,871 (the number assessed May 1, 1892, was 30,866) ; average price, \$10.73 ; value, \$706,796. In number Iowa leads, with 6,181,628 ; followed by Missouri, with 4,076,392 ; Illinois, with 3,720,059 ; Kansas, with 2,445,341 ; and Ohio, with 2,423,544. In average price New Jersey leads, with \$11.52 ; followed by Massachusetts, with \$10.73 ; New Hampshire, with \$10.23 ; Maine and Connecticut, with \$10.15 ; and Vermont, with \$10.14 ; the lowest being Florida, with \$2.50. In value Iowa leads, with \$54,348,874 ; followed by Illinois, with \$30,281,284 ; Missouri, with \$23,908,041 ; and Kansas, with \$19,329,687.



MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF JUNE, 1893.

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ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

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BOSTON:  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1893.



## CROP REPORT FOR THE MONTH OF JUNE, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., July 1, 1893.

### PROGRESS OF THE SEASON.

In Report No. 105 (June, 1893) the statistician of the United States Department of Agriculture gives the acreage of winter wheat compared with last year as 87.8 per cent, or a reduction of 12.2 points. The principal decrease has occurred in the States of Illinois, Missouri, Kansas and California. In the three former the reduction was mainly caused by the long-continued drought and extremely cold winter, much having been ploughed up and put to other crops. The condition is improved only slightly since the last report, being 75.5 against 75.3 for May. The percentage of spring-wheat area for the whole country is 94. The condition is reported as 86.4, ranging in the principal spring-wheat States from 65 in Nebraska to 92 in North Dakota. In the Southern and New England States the acreage is little short of last year, the falling off being principally in the winter-wheat growing States.

The preliminary report on oats makes the breadth nearly one point greater than last year. The condition June 1 was 88.9 against 88.5 last June. Consolidating the State returns, the average breadth for the whole stands at 100.7.

The first return of acreage of rye puts it at 94.3, or nearly six points lower than last year. The general average of condition is 84.6, the lowest for years. The same conditions which affected wheat have operated to bring about this result in condition and acreage.

The return of breadth of barley gives a decrease of 5.1 per cent from last year. The condition is reported as 88.3 against 92.1 last year. The low condition is the result of the cold and backward spring, with drought in some sections and too much rain in others.

The area under clover is somewhat reduced, the general average being 97.5 per cent of that of a year ago. The high price of seed is given as the chief reason for this reduction, though old areas have been reduced by winter-killing. The general average of condition is 92.7 against 94.9 last year, 100 in each case representing full vitality and growth.

The general average condition of pastures is 93.4, or 2.5 lower than in June, 1892, and 2.9 higher than in June, 1891. New York shows exceptionally favorable condition, the general average being 100, and Massachusetts is nearly as good with an average of 98.

The condition of apples is reported as high in New England and the Middle Atlantic States, there being an excellent set, and a good prospect for a large crop. Elsewhere the condition is lower, being especially low in the great apple States of Missouri, Illinois and Kansas, the condition being considerably below 50. At the time of making this report the "June drop" was yet to come.

The condition of peaches in States of surplus production is generally high, exceptions being Virginia and Ohio, where late frosts and cold rains have operated against the crop. Michigan and California are reported as somewhat below last year's condition.

Over a large portion of the cotton belt the germination and development of the plant have been retarded by cold weather and excessive rain. In other sections drought has had the same effect, and along the Mississippi much damage has been done by floods. The prospect for a good crop is, however, improving, in consequence of favorable weather.

In Massachusetts the acreage of rye compared with last year is given as 100, and its average condition June 1 as 98; the acreage of barley compared with last year as 100, and its average condition June 1 as 88; the acreage of oats as compared with last year as 100, and the average condition June 1 as 92; the acreage of clover as compared with last year as 100, and its average condition June 1 as 101; the average condition of spring pasture June 1 as 98; the average condition of apples June 1 as 83; and the average condition of peaches June 1 as 101.

## TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending June 5.* — Warmer than usual in Northern States, east of the Mississippi and in Minnesota, Virginia, Texas and interior of California. Temperature normal throughout Southern States and over Rocky Mountain districts. Light frosts occurred in Nevada, Wyoming and Colorado, but no serious damage has been reported. Rainfall excessive over cotton region, the Ohio and lower Missouri valleys. Considerable damage resulted to crops in the overflowed lowlands of the lower Mississippi valley. Slight excess of rainfall in States north of Ohio valley. Rainfall elsewhere less than usual, one-half to three-fourths inch in Middle Atlantic States and very light showers in New England. Generous showers in spring-wheat region. Weather generally favorable, and crops greatly benefited except in lower Mississippi valley, where warm, dry weather is greatly needed.

*Week ending June 12.* — Week warmer than usual in New England, the north-west and in Rocky Mountain districts. Temperature about normal in Ohio and central Mississippi valleys and in Lake region, slightly cooler than usual throughout cotton region and decidedly cool on Pacific coast. Less rainfall than usual over the greater portion of the country, though excessive in some parts of the South. Large deficiency of rain in New England, and over the greater portion of Middle Atlantic States and central valleys. Weather during the week has been generally favorable, owing to the previous supply of moisture in the principal agricultural districts.

*Week ending June 19.* — Week warmer than usual from New England coast and Virginia westward to Rocky Mountains. Temperature about normal in Southern States. Week cool on the North and Central Pacific States. Generally dry throughout Northern States and the spring-wheat region. Excessive rains occurred over the greater portion of the South Atlantic States. Considerable damage resulted from high winds in Florida on the 15th. Weather generally more favorable throughout the South; crop conditions have im-

proved. Harvesting of wheat is progressing as far north as central Illinois, Kansas and Ohio, but the season is from ten to twenty days late in the north-west and on the Pacific coast.

*Week ending June 26.* — Week slightly cooler than usual throughout interior of Southern States, southern New England and eastern New York. Decidedly cool on Pacific coast and over central and north plateau regions. Warmer than usual in Texas and from Lake region westward to Dakotas. Third week of warm, dry weather in the north-west, where crops are generally suffering from drought. Light frosts occurred in California about the middle of the week, causing slight injury to pears. Third week of deficient rainfall in the spring-wheat region and north-west portions of Nebraska and Kansas. More than usual amount of rain fell from eastern Kansas eastward over the States of the Ohio valley to New England coast. Weather resulted in improved crop conditions throughout the country, except in the upper Mississippi valley and Southern Atlantic States.

#### NEW ENGLAND WEATHER AND CROPS.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending June 5.* — Rainfall below average; temperature below in eastern Maine, above elsewhere; rain needed; clover leaves are curling in places; planting and seeding nearly finished; in most places fruit trees are generally blossoming full.

*Week ending June 12.* — Temperature above normal; rainfall and sunshine below normal; rain badly needed in all sections; severe drought in south-east sections; grass burning some; haying will begin in some sections this week; canker worms doing damage in orchards.

*Week ending June 19.* — Temperature about normal; precipitation and sunshine below; rain very beneficial to all crops, but more is needed; haying has commenced in some sections.

*Week ending June 26.* — Temperature below and rainfall above normal, except in eastern Maine, where drought still continues; hay crop will be an average one generally, and some have commenced to cut; small fruits and vegetables looking well.



MASSACHUSETTS WEATHER.  
*Meteorological Data for June, 1893.*

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Clear.	Partly Cloudy.	Cloudy.
Adams, .	66.8	92	20	45	8, 23	-	-	S.W.	-	-	-
Gt. Barrington	66.1	93	20	45	24	2.17	7	-	-	-	-
Springfield, .	69.2	96	20	50	1, 2	3.69	9	-	-	-	-
Amherst, .	66.6	93	20	43	2	2.93	12	N.W.	11	10	9
Fitchburg, .	66.0	90	6	50	17	2.65	10	E.	11	5	14
Worcester, .	65.4	91	20	46	1	2.54	10	N.E.	7	8	15
Dudley, .	-	-	-	-	-	-	-	-	-	-	-
Framingham,	66.4	93	6, 20	42	2	2.47	9	-	-	-	-
Concord, .	64.8	91	6, 20	44	2, 29	2.95	11	N.E.	9	12	9
Lowell, .	67.2	96	20	48	2, 29	-	-	S.E.	4	18	8
Boston, .	64.8	94	20	52	1	2.20	10	E.	8	13	9
Taunton, .	65.1	95	20	40	1	2.47	10	S.W.	-	-	-
New Bedfd.,	-	-	-	-	-	-	-	-	-	-	-
Hyannis, .	67.7	94	20	50	29	5.59	10	-	9	9	12
Provincet'n.,	63.6	90	20	45	29	5.50	8	S.	7	8	15

*Summary.*

*Temperature (F.).* — Monthly mean, 66.1°; highest monthly mean, 69.2°, at Springfield; lowest monthly mean, 63.6°, at Provincetown; maximum, 96°, at Springfield and Lowell on the 20th; minimum, 40°, at Taunton on the 1st; range, 56°; greatest local monthly range, 55°, at Taunton; least local monthly range, 44°, at Hyannis; greatest daily range, 39°, at Framingham on the 8th; least daily range, 3°, at Concord on the 23d. Average temperature for June at Springfield for twenty-six years, 68.8°; average for June, 1893, 69.2°; departure, +0.4°. Average temperature for June at Boston for twenty years, 65.9°; average for June, 1893, 64.8°; departure, -1.1°.

*Precipitation.* — Average, 3.20 inches; greatest, 5.59, at Hyannis; least, 2.17, at Great Barrington. Average for June at Springfield for forty-six years, 3.80; for June, 1893, 3.69; departure, -0.11. Average for June at Boston for

twenty-three years, 3.22 ; for June, 1893, 2.20 ; departure, —1.02.

*Prevailing Winds.* — Easterly in eastern portion of the State, and south-westerly in western districts.

*Thunder-storms.* — 4th, 6th, 12th and 20th.

*Aurora.* — Concord, 18th.

*Solar Halo.* — Taunton, 30th.

### *Remarks.*

The mean temperature of the month was slightly below the normal, and the precipitation, except on Cape Cod, was also deficient.

The latter part of the month was unusually cool, owing to the prevailing easterly winds. At Boston the week ending June 29 averaged  $11^{\circ}$  below normal. At Blue Hill the average daily temperature departure was  $-1.3^{\circ}$ .

The rainfall was about one inch below the average throughout the State, with the exception of Cape Cod, where an excess was reported.

Thunder-storms occurred on several dates, but none were severe and few reached the eastern coast.

No high gales were noted, although the wind movement was larger than usual.

The percentage of relative humidity was considerably above the average for June.

In the circular to correspondents returnable June 30 the following questions were asked :—

1. What insects are doing the most damage in your locality?

2. How is Indian corn looking, and what is the acreage as compared with previous years?

3. How is haying progressing, and what is the prospect for the crop?

4. How does the acreage of early potatoes compare with previous years, and do they promise a full average crop?

5. How have early market-garden crops compared in yield and price with former years, and what is the prospect for those not yet harvested?

6. How do dairy products compare in quantity and price with previous years?

7. What is the condition of pasturage in your vicinity?

8. What is the outlook for such fruits and berries as are grown for market in your locality, naming them.

Returns have been received from one hundred and twenty-two correspondents, and from these the following summary has been made :—

#### INSECTS.

Among insects generally prevalent are the potato beetle, rose bug and cut worm. None of these seem to be doing any unusual amount of damage this season, though there are a few reports of corn fields having been destroyed by cut worms. The potato beetle is easily held in check by the use of Paris green, and the others can best be fought by hand-gathering. The presence of the spittle insect is reported by nine correspondents, but in no case are its ravages spoken of as particularly serious. A few reports of currant worms, cabbage worms, wire worms, onion maggots, canker worms, asparagus beetles, plant lice, white grubs, fire worms, Hessian flies and striped squash bugs have been received from various portions of the State. Only three complaints of the horn fly have been received. A good description of the life-history and habits of this insect will be found on page 8 of Bulletin No. 4 (August), series of 1892. Besides the remedies there mentioned, spraying the infected animals with kerosene emulsion has been recently tried and found valuable.

## INDIAN CORN.

Although there are many slight local increases and decreases, the acreage of Indian corn appears to be about the same as that of former years. It is generally reported as being backward, but of good color, and otherwise looking well. Some correspondents, however, state that the prospect for the crop is poor, while others speak of the stand as being uneven and poor.

## THE HAY CROP.

At date of making returns, many correspondents reported that haying had not yet commenced, while probably the majority reported it to have only just begun. The crop can hardly be expected to do more than reach the average, for, though many correspondents report the crop as good, many others speak of it as poor or only fair. The drought of the early season injured many fields, particularly old fields, and those on light land. The recent rains, while delaying harvesting somewhat, have improved the crop in many sections.

## EARLY POTATOES.

The acreage of this crop does not vary much from that of previous years, although, as with Indian corn, both larger and smaller areas are reported. They are generally reported to be looking well, though somewhat more backward than usual at this season. There is every prospect of a full average crop, for, though a few speak of them as being in poor or only fair condition, many others state that they are looking unusually well.

## MARKET-GARDEN CROPS.

The yield of early market-garden crops is generally reported as being either fair or average, with prices good, although a few correspondents speak of the price of asparagus as having been low. Almost all those reporting on the prospect for late crops speak of it as being good.

## DAIRY PRODUCTS.

Dairy products appear to be about average in quantity, although, if any change can be remarked, it is in the shape of

an increase of product. There seems to be a slight but at the same time perceptible and general change for the better in price, particularly in that of butter. While there are numerous reports of an increase in price, there are few reports of a decrease, and those due entirely to local causes.

#### PASTURAGE.

The great majority of correspondents report pastures to be in either good, first-class or excellent condition. While there are some complaints of shortness on account of drought, and some speak of them as being in fair condition, the general condition may be considered as good. There are a very few reports of winter-killing.

#### FRUITS AND BERRIES.

The general outlook for fruits and berries seems to be good. Strawberries were generally a good crop, though, as usual, the crop varies greatly in different localities, some speaking of the crop as short on account of drought. Blackberries and raspberries generally promise well, as do also gooseberries and currants. Cherries were very abundant in most sections. Peaches, pears and plums promise good crops, but there is quite general complaint of apples not being up to the average. Cranberries are reported as blossoming well. Grapes generally blossomed well, but rose bugs are doing considerable damage to the vines in some sections.

## NOTES OF CORRESPONDENTS.

(Returned to us June 30.)

## BERKSHIRE COUNTY.

*Monterey* (WM. S. BIDWELL). — Cut worms are doing the most damage. Corn is looking fairly well, with about the usual acreage. Haying is just commencing, and the prospect for the crop is better than last year. The acreage of early potatoes is a little increased, and they are looking finely. Higher prices are paid for creamery products, with about the usual ones for the home-made product. Pasturage is in good condition. Apple and other fruit trees appear to be loaded.

*Lee* (A. BRADLEY). — No insects except potato beetles. Corn is looking well, though a little late ; acreage about the same. Ensilage corn increases in acreage each year. Very little haying done, and the crop fair. Early potatoes are looking finely, and promise an average crop. Creamery products are a little increased, with prices the same. Pastures and hay crop somewhat injured by drought.

*Pittsfield* (W. T. BATES). — The potato beetle is doing the most damage. Acreage of corn about the same, and it is looking first rate. Haying is just beginning, and the crop will be fair. Early potatoes are about the same in acreage, and promise a full average crop. Early market-garden crops are somewhat better than usual in yield and price. Dairy products are about as usual in quantity and price. Strawberries are plenty, and other berries promise well.

*Dalton* (W. B. BARTON). — Potato beetles are doing the most damage. Indian corn is a full acreage, but a little late. Haying just commenced ; full crop on lowlands, but uplands light. Potatoes promise well. Market-garden crops yielded fairly, and prices were better than usual. Cows are doing well ; prices for dairy products a full average. Pasturage in fair condition. Berries and plums promise a full crop ; pears and apples, a fair one.

*Windsor* (H. A. FORD). — The spittle insect is most injurious at present. Corn did not come up well, and is very uneven. No haying done as yet, but an average crop is expected. Early potatoes have about the usual acreage, and are looking well.

Dairy products are equal in quantity and price. Pastures are in good condition.

*Williamstown* (S. A. HICKOX). — Potato beetles are doing the most damage. Corn is small, but of good color. Haying just begun; the late drought somewhat injured the crop. Early potatoes promise well. Market gardens are in first-class condition. Dairy products are fully up in quantity, but prices are lower than last year. Pasturage is in good condition. Fruits and berries promise well.

#### FRANKLIN COUNTY.

*Monroe* (D. H. SHERMAN). — The potato beetle is doing the most damage. Corn is looking well; acreage about an average. Haying not commenced, but the outlook is for about a four-fifths crop. Dairy products are above the average in quantity, with fair prices. Pasturage is in good condition. Apples and pears blossomed full, wild strawberries are plenty and blackberries promise well.

*Buckland* (J. D. AVERY). — Corn is looking well, though somewhat backward; acreage less, because of cold and backward spring. Haying is progressing slowly, with the prospect of a light crop. The acreage of early potatoes is increased, and the vines promise a bountiful crop. Dairy products fully up to the average in quantity and price. Pasturage in tiptop condition. Strawberries are yielding bountifully.

*Whately* (FRANK DICKINSON). — Wire worms and cut worms are doing the most damage. Corn is in fair condition, though a little yellow in some places. Little haying done, because of wet weather; crop average. Acreage of early potatoes less than an average; prospect for a full crop. The outlook is good for all kinds of market-garden crops. Dairy produce has fallen off in quantity because of dry weather, but prices hold good. Pasturage in average condition. Early apples look well, but there is little winter fruit. Few strawberries, because of dry weather.

*Leverett* (W. L. BOUTWELL). — The green aphid is attacking the leaves of the plum, cherry and peach trees. Corn looks well, and the acreage is about an average. Haying is progressing slowly, and the crop will be short. Acreage of early potatoes about average, and they promise well. Market-garden crops have done as well as usual, and the prospect is good for later ones. Dairy products are slightly in excess in quantity, with a consequent drop in price. Pasturage is in good condition.

*Montague* (C. S. RAYMOND). — Cut worms on tobacco are doing the most damage. Corn looks fairly well, with acreage about as usual. Haying is well along, with a light crop. Early potatoes

have about the usual acreage, and average fairly well. The yield of early market-garden crops is less than usual, and prices about the same. Dairy products have increased in quantity, and prices are twenty per cent better. Pasturage is not in good condition. Strawberries, raspberries, apples and pears promise a light crop.

*Orange* (ANSEL HARRINGTON). — Rose bugs are the most troublesome insect at present. Corn is looking well, though backward; acreage about as in previous years. Little haying done yet; crop light on dry land, and good on moist. Acreage of early potatoes about average, with promise of a full average crop. Quantity of dairy products on the increase; price about as in previous years. Dry pastures are short, but moist ones look finely. Outlook poor for most fruits; strawberries yield well and raspberries promise well.

#### HAMPSHIRE COUNTY.

*Pelham* (JOHN L. BREWER). — Cabbage worms, currant worms and squash bugs are doing the most damage. Corn has about the usual acreage, but is backward. Haying will commence about July 1; the outlook is good. Potatoes look well, but are not quite as early as usual. Dairy products hold their own well. Pasturage is in first-class condition. Blueberries and huckleberries promise well. The horn fly put in its appearance about June 1, and has troubled stock somewhat.

*Belchertown* (H. C. WEST). — Cut worms, rose bugs and potato bugs are doing the most damage. Corn is backward, but has a good color, fair stand and full average acreage. Little haying done as yet, but the prospect is for a light crop. Early potatoes have a full average acreage, and are looking well. Dairy products are fully up in quantity and price. Pasturage is in fair condition. Apples promise a fair crop; pears and peaches are below average. Grapes blossomed full, but it is feared the rose bugs will ruin them.

*Amherst* (W. P. BROOKS). — Potato bugs, maggots and tobacco worms are doing the most damage. Corn is looking well, with about the usual acreage. Haying has hardly begun, but the crop will be good. Early potatoes have about the usual acreage, and are in fine condition. The quantity of dairy products increases yearly; prices unusually good. Pastures are in good condition. Apples, peaches, quinces and all small fruits promise well.

*Hudley* (L. W. WEST). — Wire worms and cut worms are doing the most damage. Corn is a little uneven and late, with about the usual acreage. Not much haying done yet, and the prospect is below the average. Early potatoes not up to the average in condition, with acreage about the same. Early cabbage looking



well, onions about an average. Dairy products about average in quantity and price. Pasturage rather short. Strawberries a light crop.

*Southampton* (C. B. LYMAN). — Potato beetles and cut worms are doing the most damage. Corn is looking well; fully up to the average. Haying progresses slowly, with about an average crop. Early potatoes have about the usual acreage, but are later than common. Dairy products are fully up in quantity and price. Pasturage looks well. Strawberries are a fair crop.

*Goshen* (ALVAN BARRUS). — Potato beetles, cut worms and wire worms are prevalent, but none are exceptionally bad. Acreage of corn slightly lower, but crop looking well. Haying just commencing, with prospect for an average crop. Early potatoes compare favorably in acreage, and look nicely. Dairy products are favorable in quantity and price. Pasturage in good condition. Fruits and berries are nearly all below average condition.

#### HAMPDEN COUNTY.

*Tolland* (F. T. MOORE). — Cut worms are doing the most damage. Corn is about two weeks late. Haying has not begun, and the crop is light. Few early potatoes were planted, and those are not promising. Dairy products are a full average in quantity and price. Pasturage is in quite good condition. Apples set light; wild berries promise a fair crop.

*West Springfield* (N. T. SMITH). — All insects are fairly active. Corn is small, but has a good stand, and is looking well; average acreage. Haying progresses slowly, because of poor weather; crop about an average. Acreage of early potatoes about the same as usual; looking well, but small. Market-garden crops show little change from former years. Milk has been abundant, and the price the same as last year; but butter has not yet reached so low a figure. Pasturage in very good condition. Strawberries are abundant, apples have set fairly well, pears are promising and cherries good.

*Agawam* (R. DE WITT). — The potato beetle is the most active of the insects. Corn looks fairly well; the acreage of corn is less, and that of tobacco greater, than usual. Haying is just beginning, with light crop on old fields, and a heavy one on new seeded ground. Acreage of early potatoes larger than usual, and the vines making a larger growth. The Milk Association handled some thirty thousand quarts more of milk in May than ever in any one month.

*Hampden* (J. N. ISHAM). — Potato beetles and black lice are doing the most damage. Corn is looking finely, with a full aver-

age acreage. Haying is just commencing, with the prospect of a good crop. The acreage of early potatoes is increased one-fifth, and they promise a full average crop. Dairy products are about average in quantity, with the price tending a little lower. Pastures have held green and growing. Spittle insects have appeared in some fields.

*Monson* (A. H. WHITE).—Rose bugs and potato beetles are doing the most damage. Corn was planted late, but is doing fairly well; acreage about average. Haying is just commencing, and the crop is nearly average. Early potatoes have about the usual acreage. Dairy products are about average in quantity and price. Pasturage has improved since the late rains. Strawberries are doing well.

*Brimfield* (S. W. BROWN).—The spittle insect is doing the most damage. Corn is looking well, though late. Much hay has been damaged during the last ten days, but the crop promises to be a good one. Early potatoes have a full acreage, and promise well. Dairy products are of good quality, with average price. Pasturage is in first-class condition. Fall apples promise a three-fourths crop, and winter about half a crop.

#### WORCESTER COUNTY.

*Petersham* (S. B. COOK).—The potato beetle and cut worm are doing the most damage among insects. Acreage of corn a little above previous years; crop small, but of good color and healthy. Haying has just commenced; crop will be only fair. Acreage of early potatoes about the same; a full average crop is now promised. Early market-garden crops are late, but yield and price are about as usual; prospect for later crops good. Dairy products are somewhat less in quantity, but the price is about the same. Pasturage is in fair condition. The outlook is good for strawberries, blackberries and apples.

*Templeton* (LUCIEN GOVE).—Potato beetles, rose bugs and squash bugs are doing the most damage. The acreage of corn is less than last year, and it is very backward. Little haying done, because of unfavorable weather; grass late. Less early potatoes planted than usual, and they are late and quite uneven. Garden crops are late, with average prices. The price of butter held up later than usual, and will not go as low; milk is about as usual. Pastures in good average condition. Plums very scarce, cherries light crop, apples light crop, strawberries good.

*Westminster* (JOSEPH HAGER).—Potato beetles are remarkably plenty, and rose bugs are numerous in some localities. Corn is looking well, with about the usual acreage. Haying has not com-

menced ; crop much improved by the recent rains. Early potatoes have about an average acreage, and promise well. Dairy products are about as usual in quantity and price. Pasturage is in good condition. The blueberry crop promises to be the best for years.

*Bolton* (H. F. HAYNES). — Potato beetles are not very prevalent, but rose bugs are eating cherries. Corn is backward, but looks well ; acreage a full average. Little haying is being done, but the crop will be good. Fully as many early potatoes as usual are planted, and are looking well. Early market-garden crops were poor ; prospect good for late crops. Cows doing well, with the usual prices for milk. Pastures in good condition. Strawberries are doing fairly well and blackberries look well.

*Grafton* (S. E. STOWE). — Potato beetles are doing the most damage. Corn is backward, but the acreage is about the same as usual. Haying just commenced, with more than an average crop. Acreage of early potatoes larger than last year, and crop looking nicely. Market-garden crops about the same as usual. More milk produced, and prices the same as last year. Pastures never in better condition. Strawberries a fine crop, and bringing good prices.

*Worcester* (H. R. KINNEY). — Potato beetles, rose bugs and squash bugs have been plenty of late. Indian corn is late, with an average acreage. But little grass cut, and the crop will be very light. About the usual amount of early potatoes was planted, but they are uneven and late. Spinach was light, but other market-garden crops have done well, and late crops look very well. Milk retails one cent higher than last year, the farmers getting half the increase. Pasturage begins to look thin. Strawberries are doing well, blackberries and raspberries promise well, grapes are not setting very full.

*Spencer* (H. H. KINGSBURY). — Potato beetles and rose bugs are doing the most damage. Corn is thrifty, with a fine color, and a trifle more than usual was planted. Very little haying has been done, but the prospect is good for an average crop. The acreage of early potatoes is slightly in excess of previous years, and they are looking finely. Early market-garden crops are about as usual in yield and price. The quantity of dairy product is on the increase, and prices are firm. Wild and cultivated berries promise an abundant crop, as do also pears and grapes.

*Southbridge* (G. L. CLEMENCE). — The spittle insect is doing the most damage. Corn is not quite up in color, but the acreage is about the same as last year. Little haying done ; prospect for crop good. Acreage of early potatoes about as usual, and they

are looking remarkably well. Dairy products are about an average in quantity and price. Pasturage is in good condition.

*Oxford* (D. M. HOWE). — The potato beetle is doing the most damage. Corn is rather backward; acreage about the same. Haying is just beginning, with a prospect of a good crop. Early potatoes promise a full average crop. Early market-garden crops are in average condition. Quantity of dairy products about the same; price a full average. Pasturage is in first-class condition. Outlook for fruits and berries good.

*Blackstone* (L. R. DANIELS). — Potato beetles, tent caterpillars and cut worms are doing the most damage. Acreage of corn average, though not as large as last year; condition fair. Haying just begun, with prospect of a good crop. Acreage of early potatoes more than an average, and prospect for crop a full average. Asparagus, rhubarb and lettuce yielded largely, and brought fair prices; prospect for later crops good. Pasturage in very good condition. Strawberries a small crop; red raspberries promise better than last year.

#### MIDDLESEX COUNTY.

*Groton* (DANIEL NEEDHAM). — Potato beetles are doing the most damage. Corn is looking well, with an average acreage. Haying has just commenced, and the crop promises well. Early potatoes have an average acreage, and the crop is very promising. Early market-garden crops were about average in yield and price. Dairy products have increased in quantity and price. Pasturage is much above average condition. Strawberries are very abundant, and currants and late berries promise abundant crops.

*Westford* (ARTHUR WRIGHT). — Rose bugs are doing the most damage. Corn is well started, but needs warm weather. No hay cut yet, because of unfavorable weather, but the prospect for the crop is good. Acreage of early potatoes about the same as usual. Dairy products are larger in quantity than last year, with prices about the same. Pasturage is in good condition. Strawberries, blackberries, raspberries and currants all look well.

*Wilmington* (C. W. SWAIN). — Rose bugs and potato beetles are plenty. Corn is looking well, with about the usual acreage. Haying is progressing slowly, but a good crop is assured. Early potatoes are about the usual acreage, and are looking first rate. Early market-garden crops did fairly well. Dairy products compare favorably in quantity and price with former years. Pasturage is in good condition.

*Winchester* (MARSHALL SYMMES). — Currant worms, cut worms and potato beetles are doing the most damage. Early potatoes

have about the usual acreage, and promise a good crop. The yield of most early market-garden crops was heavy, but the prices were low, except for peas. Early beans and second early peas were not ready to pick in June, a very unusual occurrence. They will not be ready in any quantities until after July 4. Pears and currants will be a good crop.

*Weston* (H. L. BROWN). — Potato beetles and squash bugs are to be found, but are not doing very much damage. Corn is looking well, with a somewhat increased acreage. No haying has been done, because of bad weather. The acreage of early potatoes is about the same as usual, and the crop looks well. Asparagus has been off in yield, with the price about as last year. About the usual quantity of milk is produced, with price a little higher in some cases. Pasturage is in good condition. Strawberries are a good crop, and raspberries and blackberries promise well. Canker worms have made their appearance for the first time in years.

*Hopkinton* (W. V. THOMPSON). — Rose bugs are doing the most damage. Corn is in good condition, but late; acreage about the same. Not much hay cut as yet, and only clover is above an average. Early potatoes promise an average crop. Early market-garden crops had a good yield and price. Dairy products are about average in quantity and price. Pasturage is in fair condition. Outlook for fruit and berries good.

#### ESSEX COUNTY.

*Haverhill* (EBEN WEBSTER). — Rose bugs and squash bugs are doing the most damage. The acreage of corn is fair, and the crop looks well. Haying has not begun yet, and the crop is not quite an average one. Early potatoes are looking well, with an acreage about as last year. Milk sells at the same price as in former years. Pasturage is in fully average condition. Strawberries are a good crop, cherries are plenty and currants promise well.

*West Newbury* (J. C. TARLETON). — Canker worms are doing the most damage. Corn is rather backward and small, but has a good color. Haying is progressing slowly, with the prospect of a very good crop. Early potatoes are looking well, with a larger acreage than usual. Dairy products are about the same as usual. Pasturage was never in better condition. Strawberries are a very good crop, and raspberries set well.

*Ipswich* (O. C. SMITH). — Rose bugs and potato beetles are doing the most damage. Corn looks well, and has about the usual acreage. Haying has just commenced, with an average crop. Acreage of early potatoes about average; in good condition, though planted late. Butter has increased in quantity about ten per cent,

and the price is rather above the average. Pasturage is now in good condition. Strawberries a good crop; cherries and pears promise good crops; apples about one-half a crop; wild berries will be plenty.

*Topsfield* (B. P. PIKE).—Rose bugs and potato beetles are doing the usual amount of damage. Corn is looking well, but is late; acreage about the same. Haying has just begun, with an average crop. The acreage of early potatoes is about the same as usual, and they are looking very well. Market-garden crops not yet harvested; promise an average crop. Dairy products are about the same as in former years. Pasturage is in fair condition. Apples will be a small crop.

*North Andover* (PETER HOLT, Jr.).—Rose bugs and potato beetles are doing the most damage. Corn is very small, and the acreage is less than usual. Haying is progressing slowly, owing to poor weather. Garden crops are not looking very well. Feed has been good and milk plenty. Pasturage is in very good condition. Strawberries are yielding well, and blackberries and raspberries promise well.

*Danvers* (C. H. PRESTON).—Potato beetles are doing the most damage. Corn is not as forward as usual, but looks well. Not much hay is cut yet, but the crop promises well. Early potatoes look well, but are backward. Pasturage is in good condition. Strawberries are a good crop.

#### NORFOLK COUNTY.

*Millis* (E. F. RICHARDSON).—The spittle insect and potato beetle are most injurious. Indian corn is looking poorly. Haying has commenced, with the crop below average. Acreage of early potatoes about average, and looking well. Early market-garden crops have not yielded as well as usual, but prices have been fair. More milk than usual has been produced at the same price. Pasturage is in fair condition.

*Franklin* (C. M. ALLEN).—Rose bugs and potato beetles are doing the most damage. Indian corn has more than an average acreage, and is looking well. Not much grass is cut, but the crop is ten per cent over last year's. Early potatoes have a greater acreage than usual, and are looking finely, but are late. Market-garden crops are about an average. Dairy products have advanced in quantity, at the same price. Pasturage is in exceptionally good condition. Strawberries, blackberries, raspberries and peaches are looking well, but apples are a light crop.

*Medfield* (GEO. R. CHASE).—Rose bugs are doing the most damage. Corn is looking well, with a full acreage. Haying is

just beginning, with an excellent crop. The acreage of early potatoes has increased ten per cent, and promises about a three-fourths crop. Market-garden crops have a fair yield, with prices somewhat lower and the prospect good. The quantity of dairy products equals previous years, with prices somewhat lower than last year. Pasturage is in fair condition. Strawberries are of rather inferior quality, with cherries average in yield and price.

*Cohasset* (E. E. ELLMS). — Rose bugs and potato beetles are doing the most damage. Corn is looking well, with twice the acreage of last year. Haying is progressing finely, and the crop is good. Early potatoes promise a full average crop. Early market-garden crops are about the same as usual in yield and price. Dairy products are average in quantity and price. Pasturage is extra good. The outlook for fruits and berries is good.

#### BRISTOL COUNTY.

*Mansfield* (D. E. HARDING). — Rose bugs are doing the most damage. Corn is somewhat backward. Hay is a light crop, and there has been no weather to secure it as yet. Early potatoes will be a light crop, on account of the early dry weather. Early market-garden crops do not compare favorably with previous years, but those not harvested look better. Dairy products are about the same as usual. Pasturage is somewhat dry for this season. Strawberries are a good crop and pears look fair.

*Taunton* (C. H. WILMARTH). — Rose bugs are doing the most damage. Corn is looking poorly, but the acreage is a little in excess of previous years. Haying is progressing finely, and a large crop is promised. Early potatoes have about the usual acreage, and promise an average crop. Early market-garden crops compare well in yield and price, and the prospect is good for later ones. Prices for dairy products are higher than usual. Pasturage is in good condition. Outlook for all fruits good.

*Berkley* (R. H. BABBITT). — Rose bugs and potato beetles are doing the most damage. Corn is about two weeks late; acreage smaller than last year. Haying has just begun, with the prospect of a fair crop. Potatoes are looking well, and the acreage is larger than last year. No material difference in dairy products. Pasturage is in very good condition. Strawberries are a fair crop, and raspberries and blackberries promise well.

*Somerset* (JOSEPH GIBBS). — White grubs and cut worms are doing the most damage. Corn is rather backward; acreage about as last year. Little haying done yet; crop will not be large. Acreage of early potatoes increased twenty per cent, and crop promising. Early market-garden crops an average in yield and

price. Dairy products have not changed. Pasturage is in good condition. Strawberries about a three-fourths crop.

*Dartmouth* (L. T. DAVIS). — Potato beetles and squash bugs are doing the most damage. Corn is looking well, without much difference in acreage. Haying is progressing slowly, with the prospect of a very good crop. Early potatoes are looking well, with a slightly decreased acreage. Early market-garden crops are about an average in yield and price. There is no marked change in dairy products. Pasturage is in quite good condition. Strawberries are not more than a light average crop, but currants are quite good.

#### PLYMOUTH COUNTY.

*Brockton* (DAVIS COPELAND). — Rose bugs, potato beetles and squash bugs are doing the most damage. Corn is backward, with an average acreage. Very little hay has been cut, but the prospect is good for a good crop. Early potatoes are about an average in acreage, and promise a full average crop. Market-garden crops are not quite so good as last year, and prices are somewhat below. Dairy products are about as usual. Pasturage is in good condition. Strawberries were injured by drought.

*West Bridgewater* (F. E. HOWARD). — The potato beetle is doing the most damage. Corn is looking well, but the acreage is less than usual. Haying is progressing slowly, with a good prospect for a large crop. The acreage of early potatoes compares favorably with previous years, and they promise a full average crop. Early market-garden crops were a good average, and the prospect for later ones is good. Prices for dairy products are low at present. Strawberries, currants and gooseberries are good, and cherries poor.

*Marshfield* (G. J. PETERSON). — Hessian flies, rose bugs and potato beetles are doing the most damage. Corn is backward, with a full average acreage. Haying is just beginning; light crop on uplands. Early potatoes promise a better crop than last season. Dairy products have a fair yield. Pasturage is in very good condition. Apples are not promising, and the rose bug has worked among peaches to a considerable extent. Strawberries are a fair crop, but have not ripened well.

*Halifax* (G. W. HAYWARD). — Potato beetles are doing the most damage. Corn looks well on high land, but elsewhere wire worms and the cold spring have hurt it. Haying has been delayed by bad weather; crop about an average. Early potatoes looking well, but acreage not as large as usual. Dairy products about an average in quantity, but the price better than for many years. Pasturage in poor condition. Strawberries have done well.



*Lakerille* (ELBRIDGE CUSHMAN). — Rose bugs and the Colorado beetle are doing the most damage. Corn is in fair condition, and the acreage is fully equal to former years. Haying is just commencing, with more than an average crop. Early potatoes have about the usual acreage, and promise a full average crop. Early market-garden crops were good. Pasturage is in good condition. The strawberry crop has been good, with good prices. There will not be a large yield of apples.

*Wareham* (A. SAVARY). — Cut worms are doing the most damage. Corn is rather backward, and the acreage is about the same as usual. Haying has just begun, and the crop is large. Early potatoes look well. Garden crops have suffered from drought. Dairy products are fully equal to former years in quantity and price. The dry weather has hurt pastures. Strawberries have been abundant, and other berries look well. Cranberry bogs look well, and there is a prospect of a large crop.

#### BARNSTABLE COUNTY.

*Fulmouth* (D. R. WICKS). — Potato beetles are doing the most damage. Corn is looking well, with about an average acreage. Very little haying has been done as yet. Early potatoes are looking finely, and are fully up in acreage. Market-garden crops are fully as early as usual, and are looking finely. Dairy produce is on the increase in quantity, with fair prices. Pasturage is in fine condition. Strawberries are a fair crop.

*Mashpee* (W. F. HAMMOND). — Fire worms and potato beetles are doing the most damage. Corn looks fairly well, with an average acreage. Hay looks well, and there will be a fair crop. The acreage of early potatoes has increased about one-eighth, and they promise a full crop. Early market-garden crops were very good in both price and yield, and the prospect for late ones is fair. Pasturage is in very good condition. Strawberries are a good crop; raspberries, currants and gooseberries look well.

*Barnstable* (JOHN BURSLEY). — The canker worm and cranberry fire worm are doing the most damage. Corn is very small, and the acreage is average. Haying has been delayed by stormy weather, and the yield is not over sixty per cent of that of former years. Early potatoes are slightly increased in acreage, and look nicely. Dairy products are average in quantity and price. Pasturage is in fair condition. Strawberries are yielding well and cranberries are flowering thickly.

*Brewster* (J. H. CLARK). — Cranberry vine and fire worms have done the most damage. Corn is backward, with about an average acreage. The hay crop is light, and not yet cut. Acreage of early

potatoes about average, and looking fairly well. Garden crops are late. Pasturage is in very good condition. Outlook very good for all kinds of small fruits and berries.

*Eastham* (J. A. CLARK). — No complaint of damage from insects. Acreage of corn light, and weather rather cold for the crop. The hay crop will be good on low, moist land, and light on dry land. Early potatoes look finely, with about an average acreage. The price on asparagus has ruled lower than last season. Dairy products are about average in quantity and price. Pasturage is in good condition. The apple crop will be light. • ,

#### DUKES COUNTY.

*West Tisbury* (WM. J. ROTCH). — Potato beetles are doing most damage. Corn has an average acreage, but the crop is backward. Haying is just beginning, and the crop is light. Early potatoes are looking well, with probably more than the usual acreage. There has been a good yield of early market-garden crops, with the usual prices, and the prospect for later ones is good. Dairy products are about average in yield and price. Pastures not very forward. Wild berries promise a heavy yield, and garden fruits and berries are looking pretty well. \*

MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF JULY, 1893.

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ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

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BOSTON :  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1893.



# CROP REPORT FOR THE MONTH OF JULY, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., AUG. 1, 1893.

## PROGRESS OF THE SEASON.

Report No. 106 (July, 1893) of the statistician of the United States Department of Agriculture gives the acreage of corn, compared with the breadth of acreage harvested last year, as 103.3 per cent. The increase of area is the result of the plowing up of wheat lands and sowing to corn and other crops, and is a little over 2,000,000 acres. The largest proportional increase is in the Ohio, Mississippi and Missouri valleys. The condition of the crop is returned at 93.2. This is the highest July average reported since 1887, when the condition stood at 97.7. The condition is slightly above that reported in July, 1891, when the largest crop ever grown was made.

The condition of winter wheat is reported as 77.7 against 75.5 on June 1, a gain of 2.2 points. This gain was, however, more than offset by the falling off in condition of spring wheat, from 78.8 to 76.6. The season has been unusually unfavorable to wheat, and the conditions have been low in every report. On this account much of the area has been plowed up and devoted to corn and other crops. The decrease of acreage as compared with last year is 10.2 points, and has taken place in the best wheat producing States.

Oats about hold their own, the condition being 88.8 as against 88.9 June 1. This is the highest condition since 1889, when it stood at 94.1. In July 1886 the condition was the same as in the present month.

Rye has advanced from 84.6 on June 1 to 85.3 this month. Winter rye stands at 83.8 and spring rye at 89, making the combined average as above given.

Barley has changed but little in condition during the month. The average is 88.8 against 88.3 June 1. The

condition is the result of a cold backward spring, with drought in some sections and too much moisture in others. The acreage of potatoes is given as 101.1 per cent of that of last year. Only two States, New York and Kansas, fall below last year in acreage. This increase of area is accounted for by the shortage and high prices of last year, but is hardly so great as would naturally be expected. A shortage of seed potatoes in many sections prevented a greater increase. The returns of condition average 94.8 for the whole country, and this, with the increase of acreage, would indicate a crop well up to the average. The July condition is, however, usually higher than the condition at any subsequent date. The condition is high in New England.

The returns for tobacco show a slight decrease in acreage compared with last year, the aggregate breadth being 98.6 of last year's acreage. There has been a decrease in New York, Kentucky and Virginia, and an increase in Massachusetts, Connecticut, Maryland, Tennessee, Indiana and Missouri. The present condition is higher than any July condition for five years, the general average being 93.

The general average condition of clover is 92.6, as against 95.5 a year ago. Drought during last autumn and this spring and freezing during the winter are among the causes of the reduced condition. As compared with a month ago the change in condition is very slight, being a reduction of one-tenth of one per cent. Cutting is later than usual in many localities. The condition of timothy falls below the high one of last year, but is rather better than in 1891. The present condition is 89.8.

The condition of pasturage is on the whole very satisfactory, though the general average is reduced to 94 from the unusually high one of 98.4 a year ago.

The apple crop, commercially considered, will be light and in many sections a complete failure. The set has been poor, and the drop, still continuing, severe. The falling off in condition prevails throughout the principal New England and Middle Atlantic States, and in the Ohio valley and Missouri fruit belt things have gone from bad to worse. A good crop is expected on the Pacific coast.

A large crop of peaches is indicated by the returns of the

present month. The percentages of June are well sustained in the States of surplus production, excepting Ohio and Georgia. In New Jersey, Delaware and Maryland the prospect has been rarely if ever so promising. A good crop is assured, and, as the quality is excellent, it is thought that prices will rule high.

The condition of grapes is generally high throughout the country. Rot and rose bugs are doing damage in some sections, but on the whole the prospect for the crop is excellent.

The average condition of cotton is 82.7, as against 85.6 in June, showing a decline of nearly three points. The reports show prevalence of bad weather conditions, cool nights, excessive rains and occasional drought spots. Considerable injury has been caused by lice and other insects.

In Massachusetts the acreage of corn compared with last year is given as 100, and its average condition July 1 as 94; the average condition of spring rye as 98; the average condition of oats as 92; the average condition of barley as 88; the acreage of potatoes as compared with last year as 103, and the average condition as 97; the acreage of beans as compared with last year as 99, and the average condition as 98; the acreage of tobacco as compared with last year as 105, and the average condition as 98; the average condition of clover as 95; the average condition of timothy as 93; the average condition of pasture as 86; the average condition of apples as 69; the average condition of peaches as 91; and the average condition of grapes as 98.

#### TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending July 3.* — Warmer than usual generally over all agricultural districts, except in the vicinity of the upper Lake region, Minnesota and Texas. Throughout the central valleys the deficiency in temperature was slight, but on Atlantic and North Pacific coasts it was from 3° to 6° per day below the normal. Rainfall less than usual, except in a belt of country extending from the Dakotas southward and south-eastward, over Kansas, Nebraska, Indian Territory, Arkansas and Mississippi, where it was in excess. Generous showers occurred in the upper Mississippi valley and

over the Lake region during the night of July 4. Weather especially favorable to the corn crop. The cotton crop is improving, but the plant is small. Reports from the spring-wheat region indicate improved conditions, owing to recent rains. California reports a prospect for a large crop of grapes, but the fruit crop is short on the North Pacific coast.

*Week ending July 10.* — Week slightly warmer than usual in Southern States, except along the Gulf coast. Also warmer in the Rio Grande Valley, Kansas and Colorado, though the excess was slight. Temperature lower than usual from New England westward over the Lake region and North-west. Also on the Pacific coast. Weather especially favorable for harvesting throughout winter-wheat belt. Rye harvest is progressing in Minnesota and Nebraska, and the corn crop is much improved and in excellent condition in the principal corn States. Rainfall less than usual throughout the New England, Middle and Southern States and Ohio valley, although warm weather and local showers have resulted in a nearly general improvement in crop conditions. In the upper Mississippi and Missouri valleys and upper Lake region the rainfall was above normal, and crops are greatly improved. Season cool and backward on Pacific coast.

*Week ending July 17.* — Warm throughout the Ohio, upper Mississippi and central Missouri valleys. Also warmer than usual in the Lake regions and in the west portions of Pennsylvania, Virginia and Texas. The warm, dry weather has been especially favorable for harvest work and haying. Hay crop excellent in almost all sections, and in many States secured in excellent condition. Slightly cooler than usual in the lower Mississippi valley and along Atlantic coast, except in New Jersey. Cool weather continues on the Pacific coast and over the plateau region. More than the usual amount of rain fell throughout the Lake region, and in Missouri, Kansas and Nebraska, where it was much needed. Also more than the average rainfall in the lower Mississippi valley and portions of Georgia and Alabama. Light showers on the Atlantic coast and in the Ohio and Mississippi valleys. Rain is generally needed east of the Mississippi, in Texas and the upper Missouri valley. The season has been rela-



tively dry in the interior of the Middle Atlantic States and New England. General improvement in crop conditions, corn reported in excellent condition, and the cotton crop is improving.

*Week ending July 24.* — Week slightly cooler than usual on the Atlantic coast and in lower Lake region. Also cooler from the central Mississippi valley westward to the Pacific coast. Departures from the normal were slight, except over the southern plateau region, in Indian Territory and northwestern Arkansas. Unusually warm in Montana, and also slightly warmer in the interior of California. Rainfall has been generally in excess, but not evenly distributed, over the greater portion of the cotton region. Largely deficient generally throughout the Northern States, and crops are very much in need of rain from southern New England and the Middle Atlantic coast westward to the Missouri valley. Almost total absence of rain from Nebraska eastward over States of the Ohio valley to Pennsylvania. Corn crop as yet uninjured, but in a threatened condition in Nebraska and Illinois. Weather conditions are generally favorable on the Pacific coast.

#### NEW ENGLAND WEATHER AND CROPS.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending July 3.* — Precipitation below average; temperature below average on coast and about normal in interior; haying has commenced, and the prospects are favorable for an average crop, except in some northern sections, where drought still continues; fruit outlook favorable.

*Week ending July 10.* — Rainfall below normal, except in northern and western sections; temperature normal; good hay weather, crop will be an average one, except in scattered places; apples and pears falling from trees to considerable extent.

*Week ending July 17.* — Temperature normal and sunshine above; precipitation deficient; haying well under way, an average crop in most sections; gardens and small fruits need rain badly.

*Week ending July 24.* — Haying nearly finished; more rain needed for all crops; potato blight appearing in some sections; corn not doing very well.

## MASSACHUSETTS WEATHER.

*Meteorological Data for July, 1893.*

[Furnished by New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Clear.	Partly Cloudy.	Cloudy.
Adams, . . . . .	66.4	90	22	40	21, 25	-	-	N.E.	17	-	14
Gt. Barringt'n. . .	-	-	-	-	-	-	-	-	-	-	-
Springfield, . . .	72.4	95	22	52	25	2.07	8	-	-	-	-
Amherst, . . . . .	67.5	90	22	42	25	2.59	11	N.W.	16	12	3
Fitchburg, . . . .	69.5	89	22	54	23	1.54	10	W.	19	7	5
Worcester, . . . .	69.1	89	22	51	24	1.38	9	W.	4	23	4
Dudley, . . . . .	-	-	-	-	-	-	-	-	-	-	-
Frammingham, . .	70.0	93	22	49	11, 25	2.91	10	-	-	-	-
Concord, . . . . .	69.4	91	*	47	11, 25	1.93	13	S.W.	11	17	3
Lowell, . . . . .	72.4	95	16	51	25	-	-	W., N.W.	3	27	1
Boston, . . . . .	71.4	91	22, 26	54	24	1.72	11	W.	11	15	5
Taunton, . . . . .	70.6	95	22	45	25	0.63	7	S.W.	15	13	3
New Bedfd., . . .	-	-	-	-	-	-	-	-	-	-	-
Hyannis, . . . . .	73.0	93	17	50	1	3.08	12	-	16	12	3
Provincet'n., . .	-	-	-	-	-	-	-	-	-	-	-

\* Maximum on 16th, 22d, 26th.

*Summary.*

*Temperature* (F.). — Monthly mean,  $70.2^{\circ}$ ; highest monthly mean,  $73.0^{\circ}$ , at Hyannis; lowest monthly mean,  $66.4^{\circ}$ , at Adams; maximum,  $95^{\circ}$ , at Springfield on the 22d; Lowell on the 16th; Taunton on the 22d; minimum,  $40^{\circ}$ , at Adams on the 21st and 25th; greatest local monthly range,  $50^{\circ}$ , at Adams and Taunton; least local monthly range,  $37^{\circ}$ , at Boston; greatest daily range,  $45^{\circ}$ , at Adams on the 21st; least daily range,  $6^{\circ}$ , at Boston on the 27th. Average temperature for July at Springfield for twenty-six years,  $73.2^{\circ}$ ; average for July, 1893,  $72.4^{\circ}$ ; departure,  $-0.8^{\circ}$ . Average temperature for July at Boston for twenty-three years,  $71.8^{\circ}$ ; average for July, 1893,  $71.4^{\circ}$ ; departure,  $-0.4^{\circ}$ .

*Precipitation.* — Average, 1.98 inches; greatest, 3.08, at Hyannis; least, 0.63, at Taunton. Average for July at

Springfield for forty-six years, 4.51 ; for July, 1893, 2.07 ; departure, —2.44. Average for July at Boston for twenty-three years, 3.59 ; for July, 1893, 1.72 ; departure, —1.87.

*Prevailing Wind Direction.* — West.

*Thunder-storms.* — 1st, 3d, 5th, 7th, 8th, 12th, 17th, 18th, 19th, 21st, 22d, 23d, 25th, 26th, 27th.

*Aurora.* — Concord, 15th.

*Frost.* — Taunton, 25th (light).

*Hail* — Worcester, 5th.

*Solar Halos.* — 3d, 7th, 12th, 31st.

### *Remarks.*

The temperature during the month varied slightly from the normal, but the precipitation was decidedly deficient. The showers were frequent, but very little damage has been reported, and the rainfall accompanying them was light and unevenly distributed. The maximum temperature of the month occurred generally on the 22d, but at some stations the 16th was warmer ; the coolest morning was the 25th, when the minimum ranged from 40 to 54 degrees, and a light frost was reported by the observer at Taunton. The amount of sunshine was considerably above the average ; at Boston only five cloudy days were recorded. There have been no violent wind-storms reported, although some damage was done to fences, out-buildings, etc., during several of the thunder-storms in various parts of the State.

In the circular to correspondents returnable July 28 the following questions were asked : —

1. What insects are doing the most damage in your locality?

2. What is the condition of Indian corn, and what proportion of the crop will be put into the silo?

3. What is the quantity and quality of the hay crop as compared with former years?

4. What is the condition of early and late potatoes, and what price has the early crop brought per bushel?

5. How have market-garden crops compared in yield and price with former years?

6. What is the prospect for apples, pears, peaches, grapes and cranberries?

7. What is the condition of pasturage in your vicinity?

8. How has the rye crop compared with former years?

Reports were somewhat slow in coming in, but one hundred and ten returns were received from which the following summary was deduced : —

#### INSECTS.

There has been little serious damage to crops from insects during the past month, some correspondents going so far as to say that there has been no damage whatever. The potato beetle is of course universally prevalent but has been kept well in check, and does not seem to have been quite so destructive as usual. Scattering reports have been received of damage done by wire worms, squash borers, rose bugs, grasshoppers, asparagus beetles, codling moths, curculios, green cabbage worms, white strawberry grubs, currant worms, cut worms, plant lice, the pear tree psylla and the various cranberry insects. None of these, however, appear to be particularly destructive. The horn fly is somewhat more prevalent than a month ago, but is not so troublesome as it was feared it would be.

#### INDIAN CORN.

Indian corn promises a good crop at the present time, most correspondents referring to it as in average, good or fine condition. Some speak of it as late, but this is usually

coupled with the statement that it is growing fast. In answer to the portion of the question referring to the amount of the crop used for ensilage twenty-four correspondents report that from one-fourth to three-fourths of the crop will be thus utilized, twenty-two report that none will be so used and the majority of the remainder speak of the proportion as very slight. Several correspondents state that new silos are building, and that the amount of ensilage used is every year increasing.

#### THE HAY CROP.

Hay was probably, on the whole, an average crop in quantity, as the light yields in particular sections were balanced by heavy ones in others. It was generally secured in excellent condition, the weather having been very favorable for harvesting, and the quality first class. The prospect for the second crop is at present poor on account of dry weather, but late rains may improve it.

#### POTATOES.

About half the correspondents speak of early potatoes as being badly injured by drought, while the remainder speak of them as being in good condition. On the whole, the early potato crop must be light. In many localities harvesting has not commenced. One dollar per bushel appears to be the ruling price, though reports of \$1.25, \$1.50 and even higher prices are not infrequent. Late potatoes promise well at present though badly in need of rain in most localities.

#### MARKET-GARDEN CROPS.

Market-garden crops are generally reported to be about average in yield and price, though some correspondents speak of the yield as being a little short. Several speak of peas as scarce and high. If anything prices are somewhat improved, though the change is not a marked one. The correspondent in Arlington speaks of crops as having been small and inferior and prices low.

#### FRUITS AND BERRIES.

Apples will be a light crop in almost all localities, many correspondents speaking of the crop as very light, and a

number of others calling it a total failure. Even where apples set well the "drop" was very severe and still continues. Pears promise a fair crop, though hardly up to the average in most sections. Peaches promise well generally, though light crops are reported by some correspondents. This is hardly a general fruit crop in this State, and many fail to mention it altogether. Grapes generally promise a good crop, and in many cases correspondents refer to the prospect as excellent. Cranberries set well and promise a full crop, one correspondent speaking of it as enormous. Other berries have generally yielded fairly well.

#### PASTURAGE.

The condition of pastures varies much in different localities, local showers having kept them up in some sections, while in others comparatively near at hand they are brown and dry. However, the majority of correspondents speak of them as either dry, injured by drought or very dry. This condition must not be considered as universal, as many report them to be in good or excellent condition. Rains in the near future would probably revive many of those now suffering from drought.

#### THE RYE CROP.

The rye crop was generally satisfactory, and may be considered as, on the whole, rather better than an average crop. Many correspondents state that rye is but little grown in their localities except for fodder.

## NOTES OF CORRESPONDENTS.

(Returned to us July 28.)

## BERKSHIRE COUNTY.

*Sheffield* (DWIGHT ANDREWS). — Potato beetles and rose bugs are doing the most damage. Corn is in fine condition, and one-third of the acreage will be used for silage. The hay crop was of good quantity and average quality. Potatoes are in good condition, with the price at \$1.00 per bushel. Market-garden crops are about average in yield and price. Fruit will not be up to the average this year. Pastures are very dry at present. Rye was a full average crop.

*Egremont* (J. H. ROWLEY). — The potato beetle is doing the most damage. Corn is about ten days late. Potatoes are looking fairly well, with the price at \$1.00 per bushel. Market-garden crops are about average in yield and price. Apples, pears and peaches will be poor crops; grapes will be fair. Pasturage has been hurt by drought, and is not in very good condition. The rye crop was about average, though many fields winter killed badly.

*Becket* (W. H. SNOW). — The potato beetle is doing the most damage. Corn is late, but is doing well now; probably one-fourth will be put into the silo. Hay was a full average in quantity and quality. Early potatoes look well, and bring \$1.20 per bushel; few late ones planted. Market-garden crops are late, with prices about as usual. Apples will be a light crop, pears promise well, grapes and cranberries are about as usual. Pasturage is in fine condition. Rye is a good crop. Frequent showers have delayed haying somewhat. Help is scarce and commands good wages.

*Windsor* (H. A. FORD). — The potato beetle is doing the most damage. Corn is ten days later than usual and very uneven; no silos in this locality. The hay crop was larger than last year, but not up to the average; quality extra. Potatoes are looking finely. Apples will be a light crop. Crops and springs will be benefited by the heavy showers of July 26.

*Hancock* (C. H. WELLS). — Potato beetles, cabbage worms and currant worms are doing the most damage. Corn is looking very fair; only one silo in town. Hay was a full average crop, of good

quality. No potatoes have been dug as yet, but they look as well or better than last year. Apples are plenty, and pears will be a fair crop. Pastures are in good condition. The rye crop compares favorably with former years.

*Williamstown* (S. A. HICKOX). — The potato beetle is doing the most damage. Corn is about ten days late, but the stand is quite good. Hay was a little below the average in quantity, but of first-class quality. Potatoes are in good condition. Market-garden crops are first class in yield and price. Apples will be a first-class and pears a fair crop, while grapes promise a good crop. Pasturage is very short. Rye was a fair crop.

#### FRANKLIN COUNTY.

*Rowe* (J. F. BROWN). — Potato beetles are doing the most damage. Corn is late this season, but is looking well; none is put into the silo. The hay crop was above the average in quantity and of No. 1 quality. Potatoes will be up to the average crop, and the price is not yet fixed. Market-garden crops are about the same as in years past in both yield and price. There will be about half a crop of all kinds of fruit. The condition of pasturage is about seventy-five per cent of an average.

*Colrain* (A. A. SMITH). — Potato beetles are doing the most damage. Corn is in good condition, and one-fourth of the crop will go into the silo. The hay crop was fully up to the average in quantity and quality. Early potatoes are somewhat late, and sell for \$1.00 per bushel; late ones promise well. Market-garden crops are about as usual in yield and price. The prospect for the fruit crop is not good. Pastures are dry. Rye was about an average crop. The recent rains have helped all crops.

*Ashfield* (CHAS. HOWES). — Wire worms are damaging early potatoes. Corn is rather uneven; a small portion will be put into the silo, and some new ones are building this season. The hay crop was a full average and secured in good order. Potatoes look well, but are drying up on light land; price \$1.20 per bushel. Fruit will be a short crop with the exception of peaches. Feed is getting short in pastures. Rye is well filled out. Showers this week have helped all the crops, and it now looks more favorable for the rowen crop.

*Sunderland* (J. M. J. LEGATE). — Cut worms and potato beetles are doing the most damage. Corn is late; probably a third of the acreage will go into the silo. The hay crop was three-fourths of an average and two-thirds that of last year; very little was damaged by rain. No late potatoes were planted; early ones are more than an average crop, and are selling for \$1.00 per bushel.



Market-garden crops are above the average, and prices are better than for some years. Apples, pears, peaches and grapes promise a heavy crop. Pasturage is in good condition. Rye is a good crop. Tobacco is from a week to ten days late, but is looking well and growing fast.

*Northfield* (CHAS. POMEROY). — The potato beetle is doing the most damage. Corn is looking well, but is about a week later than last year. No new silos have been built this year. The hay crop was of first-class quality, but the quantity was about 20 per cent off. Potatoes are not an average crop; price \$1.50 per bushel. Market-garden crops are hardly an average in yield, but the price is about as usual. There are very few apples, pears and peaches; grapes will be a fair crop. Pastures are short, because of dry weather. Rye was not quite an average crop.

*Orange* (ANSEL HARRINGTON). — Grasshoppers are our most troublesome insect. Corn is looking finely, and three-fourths of the crop will be put into the silo. Hay was about an average crop both in quantity and quality. Potatoes are in very good condition, with the price ranging from \$1.00 to \$1.50. Market-garden crops are about as in previous years in yield and price. All kinds of fruit will be a light crop with the exception of peaches. Pasturage is in very good condition.

#### HAMPSHIRE COUNTY.

*Enfield* (D. O. CHICKERING). — Potato beetles are doing the most damage. Corn is in good condition; but few silos in this vicinity. The hay crop was fully up to the average in yield and quality. Early potatoes were somewhat affected by the dry weather, but late ones are looking well. There will be but few apples, but the prospect for all other kinds of fruit is good. Pasturage is in fair condition. Rye was a very good crop.

*Belchertown* (H. C. WEST). — Insects are doing very little damage. Corn is in first-class condition. The hay crop was below the average in both quantity and quality, the promise of the early part of the season not having been fulfilled. Early potatoes have been somewhat injured by drought, but late ones promise a good crop. Apples and pears will be a three-fourths crop, and grapes will be first class. Pasturage is shorter than usual at this season. Rye was a first-class crop.

*North Hadley* (H. C. RUSSELL). — Potato beetles are doing the most damage. Corn stands well and is making rapid growth; a very small percentage goes into the silo. Hay was a three-fourths crop and was gathered in good condition, with the exception of the first cutting, which was injured by rain. The condition of potatoes

is below the average. Some early vegetables are scarce and high, while others are plentiful. Apples will be below the average, with pears and grapes plenty. Pasturage is in fair condition. A good crop of rye was harvested.

*Southampton* (C. B. LYMAN). — Hardly any damage is being done by insects. Corn is about average in condition, and but a small portion will be ensilaged. Hay was a full average crop, with the quality never better. Early potatoes are not up to the average crop, price \$1.00 per bushel; late ones are suffering from drought. Apples and pears will be a light crop, peaches a good crop and grapes a very heavy one. Pastures are looking brown, and feed is short. Rye was a full average crop.

*Chesterfield* (HORATIO BISBEE). — The potato beetle is doing the most damage. Corn is in fair condition, though a little uneven; but one or two silos in town. Hay was a fair crop, of good quality. Early potatoes are a light crop, and bring \$1.00 per bushel; late ones are looking fairly well. Apples will be a light crop. Pasturage is in fairly good condition, but will soon be short unless we have rain.

*Goshen* (ALVAN BARRUS). — Potato beetles and cabbage worms are doing the most damage. Corn is in fairly good condition; little will find its way into the silo, but probably three-fourths of the crop will be fed green. The hay crop was a high average in both quantity and quality. Potatoes are a fine crop, and sell for \$1.00 per bushel. Apples and pears will be a light crop. Pasturage is in very good condition. The rye crop was satisfactory.

#### HAMPDEN COUNTY.

*Tolland* (F. T. MOORE). — The potato beetle is doing the most damage. Corn is two or three weeks late; only a small portion will be ensilaged. Hay was an average in quantity and quality. Early potatoes are looking well at the present time. Apples will be an almost total failure, as the fruit and leaves are dropping from the trees. Pasturage is in very good condition.

*Westfield* (C. F. FOWLER). — The potato beetle is doing the most damage. Corn is curling badly from drought, and some pieces are beyond recovery. Hay is a full average in quantity and of fine quality. Dry weather has shortened the potato crop; prices run from \$1.00 to \$1.25 per bushel. Apples will be a very light crop; pears, light; peaches and grapes good. Most pastures are very dry. Rye was a little short and not well filled. Apples have dropped very badly.

*Holyoke* (JOHN C. THORPE). — Insects are doing no damage. Corn is in fair condition, except on dry lands; but a small portion

of the crop will be put into the silo. Hay was between 80 and 90 per cent of a full crop, with quality good. Early potatoes are a light crop; price \$1.00 to \$1.25 per bushel. Late potatoes may make a fair yield, but are affected by the drought. Market-garden crops are about an average in yield and price. Apples dropped badly, and will be a light crop; pears will be fair and grapes good. Pastures are very dry and need rain. Rye was about an average crop. All crops need rain greatly.

*West Springfield* (T. A. ROGERS). — Potato beetles and grasshoppers are most injurious at present. Corn is generally ten days late, and not over one per cent will go into the silo. The hay crop was fully up to the average in quantity, and was gathered in fine condition. Potatoes have been injured by drought; price \$1.00 per bushel. Apples will be a short crop, pears full and peaches average. The drought is quite severe, and pastures are very short. Rowen is not starting well. Rye was a good crop.

*Wilbraham* (F. E. CLARK). — Potato beetles are doing the most damage. Corn is looking fairly well, but needs rain as the leaves are curling badly; not over one-third of the crop will be used for silage. The hay crop was above average in quantity and quality, but the second crop will be very light because of severe drought. Early potatoes are a light crop, with prices from \$1.00 to \$1.25 per bushel. Apples will be about half a crop, with pears and peaches a full average. Pastures are drying up, and farmers are soiling their cows. Rye was a full average crop.

*Monson* (A. H. WHITE). — Corn is in nearly average condition. There are but few silos in town. The hay crop was an average in quantity and of extra quality. Dry weather is hurting potatoes; none have been sold. There will be small crops of all kinds of fruit. Pastures are dry and cows are shrinking. The rye crop was not up to the average.

#### WORCESTER COUNTY.

*West Brookfield* (L. H. CHAMBERLAIN). — Potato beetles are doing the most damage. Corn is in fine condition, and promises more than an average crop. There is but one small silo in town. Hay was a good crop, and above the average in quality. Both early and late potatoes were much injured by drought and bugs; present price \$1.00 per bushel. Market-garden crops are a full average. Apples are a very light crop, but pears and peaches are a full crop. Pastures were in good condition to July 20, but have since been considerably injured by drought. Rye was a full average crop.

*Douglas* (T. M. POTTER). — We are comparatively free from

injurious insects. Corn is in fair condition. There are but two silos in town. The hay crop was larger than for the last two years and the quality good. Early potatoes are a small crop, and bring \$1.60 per bushel. Little has been done with market-garden crops because of drought. There will be a very small crop of fruit. Pastures are badly dried up, and most farmers have to feed their cows.

*Blackstone* (L. R. DANIELS). — Caterpillars are not so destructive as usual, but all other insects are as annoying as ever. Corn is in need of rain, but is otherwise in good condition. There is only one small silo in this vicinity. Hay was one-fifth more than an average crop, and of the very best quality. Both early and late potatoes are suffering from drought; price from \$1.10 to \$1.25 per bushel. Apples half a crop; pears, peaches and grapes a full crop. Pasturage is badly in need of rain.

*Grafton* (S. E. STOWE). — The potato beetle is doing the most damage. Corn is ten days late and needs rain; one-tenth of the crop will go into the silo. Hay was an average crop, of good quality. Potatoes are nearly ruined by drought. Market-garden crops are late, and drying up in many places, but prices are good. Apples will be half a crop and pears a three-fourths crop. Most of the pastures are crisp and brown. Rye was a good crop.

*Southborough* (E. F. COLLINS). — Grasshoppers and the codling moth are doing the most damage. Corn is in good condition, and about two-thirds of the crop will be put into the silo. The hay crop was average in quantity and quality. Early potatoes are a light crop, having been injured by dry weather. There are but few apples, but pears and peaches will be good crops. Pastures are in average condition, though rather dry.

*Worcester* (H. R. KINNEY). — Potato beetles are doing the most damage. Corn is rather small; more than usual will be put into the silo. The hay crop has been better than was expected, many reporting a better crop than last year. Both early and late potatoes promise a very light crop, not many have been dug and from \$3.00 to \$3.50 per barrel has been paid. Market-garden crops have had an average yield, and have sold fairly well. Apples will be a light crop, but pears and peaches promise full crops. Pastures are very dry. Rye has been a good average crop.

*Oakham* (JESSE ALLEN). — Potato beetles are doing the most damage. Corn is looking well; very little will be put into the silo. The hay crop was larger and of better quality than last year. Potatoes have been badly injured by dry weather; price, \$1.20 per bushel. Market-garden crops compare well in yield and price with former years. There are very few apples and peaches,

but pears and grapes will be abundant. Pasturage has been badly injured by dry weather. Rye was a good crop.

*Dana* (E. A. ALBEE). — Potato beetles and grasshoppers are doing the most damage. Corn is in average condition, but rather late: none will be ensilaged. The hay crop was larger than last year, and mostly secured in good condition. Early potatoes are in good condition, and sell for \$1.25 per bushel; late ones will be a good crop if they do not blast. Market-garden crops are average in quantity and price. There are no apples, few pears and peaches, and rose bugs destroyed the grapes. Pasturage is in good condition. The rye crop was a full average.

*Leominster* (W. B. HOSMER). — Insects are doing but little damage. Corn is in good condition: very little is put into the silo. The hay crop was a good average in quantity and of good quality. Potatoes are in good condition, but very few have been harvested. Market-garden crops are fully up in yield and price. Apples will be a poor and pears not an average crop, but grapes promise a good crop. Pastures are mostly looking well. Rye was an average crop.

*Fitchburg* (Dr. JABEZ FISHER). — The pear tree psylla is doing the most damage. Corn is of fine color, and is growing rapidly. The hay crop was above the average in quantity and of good quality. Apples will be a very light crop, especially Baldwins. Pears will be a moderate crop, and grapes the same. All fruits seem unusually fair and free from worms and blemish, and thus far there has been little fungus. Pastures were considerably injured by past dry weather, but are improved by recent rains.

#### MIDDLESEX COUNTY.

*Groton* (DANIEL NEEDHAM). — The maggot which attacks the roots of squash vines is doing much damage. Corn is in fair condition, but has suffered from dry weather and cool nights. The hay crop was in excess of the last few years in quantity and quality. Potatoes are in fair condition, and sell for \$1.25 per bushel. Market-garden crops have been better than usual in yield and price. Apples will be a poor crop, with other fruits up to the average, and berries a good crop. Pastures with southerly slope have suffered from drought; others are in good condition. The rainfall for July was only one and one-fourth inches. Rye was an average crop.

*Chelmsford* (P. P. PERHAM). — Potato beetles and cut worms are doing the most damage. Corn is looking finely; one-half the crop will go into the silo. The hay crop was of extra quality and good average quantity. Early potatoes promise well, but late ones

have suffered from drought. Market-garden crops are abundant, and sell well at fair prices. Apples will be less than half a crop, but pears, peaches and grapes promise well. Pasturage looks fresh and green since the late showers. Rye was somewhat less than an average crop.

*Concord* (W. H. HUNT). — Potato beetles and asparagus beetles are doing the most damage. Corn is a little late, but is now doing well. The hay crop was up to the average in quantity, with quality good and well secured. All potatoes on light land have suffered considerably from dry weather. Few market-garden crops have been harvested. Asparagus and cucumbers were not quite so good as last year. Apples will be a very light crop, pears fair, peaches rather light and grapes good. Pastures are suffering from drought. Rye was about an average crop.

*Ashland* (H. R. STEVENS). — Corn is in good condition; none is put into the silo. The hay crop is all in, and is above the average in quantity and quality. Good rains since haying have started the second crop. Early potatoes will not be half a crop because of dry weather; price \$1.50 per bushel. Market-garden crops have been an average in yield, with prices better than usual. Apples are few, but pears and grapes will be good crops. Pastures are dry, but recent rains will help them. Rye was about an average crop.

*Arlington* (W. W. RAWSON). — No insects are doing damage at present. The hay crop was good in quantity and quality. Early and late potatoes will be small crops, and the prices are low. The weather has been dry and hot, and market-garden crops small and inferior. Prices have also been low and wages high. At present, however, there is an abundance of help, and they will work for what they can get. Apples and pears promise a fair crop. Pasturage is in very poor condition. Rye was better than usual.

*Wilmington* (C. W. SWAIN). — Potato beetles are doing the most damage, though rose bugs have injured cranberry vines. Corn is in good condition, and probably one-half the crop will be put into the silo. The hay crop is of good quality, and ten per cent larger than last year. Potatoes are not a good crop, and none have been sent to the market as yet. Market-garden crops have been an average in yield and price. Apples will be a poor crop, and pears and cranberries fair. Pasturage is in very poor condition.

#### ESSEX COUNTY.

*Haverhill* (EBEN WEBSTER). — Insects are doing little damage. Corn is not quite in average condition; about one-fourth of the crop will be put into the silo. Hay was of good quality, but not

quite an average crop. Early potatoes are a good crop; price \$1.25 per bushel; late ones are looking well. Market-garden crops made a good yield except peas, and prices have been above the average. Apples are scarce, pears will be about half a crop, peaches a full crop and grapes look well. Pastures are rather dry, but improving.

*Groveland* (ABEL STICKNEY). — Corn is looking well, but a little late. There are no silos in this vicinity. The hay crop was more than an average both in quantity and quality. Blight has attacked early potatoes somewhat; late ones are looking well. Market-garden crops have been good in yield and price. Apples will be a poor crop, pears average and peaches not extra, while grapes are looking well. Pastures are short, owing to the drought.

*North Andover* (PETER HOLT, Jr.). — Corn is small and late. The hay crop was the best for many years, and was secured in excellent condition. The dry weather has injured early potatoes, and hardly any are ready for market yet. Prices for market-garden crops have been good, but the yield has been light. Apples will be a poor crop, pears good and grapes fair. Dry weather has made feed short. The rye crop was above the average.

*Topsfield* (B. P. PIKE). — Corn is in average condition; 5 per cent will go into the silo. The hay crop was average in quantity and of excellent quality. Early potatoes are about half a crop, and late ones are not very promising; price \$1.10 per bushel. Market-garden crops have been very light in yield, but prices have been good. Apples will not be more than a one-fourth crop. Pears will be half a crop, and grapes and cranberries are not promising. Pastures are all dried up.

*Danvers* (C. H. PRESTON). — Corn is in good condition, and nearly all the crop will be put into the silo. Hay was an average crop of good quality. Early potatoes are a small crop owing to dry weather. Apples will be a small crop. Pasturage is in a very poor condition.

*Marblehead* (WM. S. PHILLIPS, Jr.). — Potato beetles are doing the most damage, but are less injurious than usual. Corn is in excellent condition, and 75 per cent of the crop will be put into the silo. The hay crop appears to be fully up to the average in quantity and quality. Early potatoes have blighted badly, but late ones are now looking finely; price \$1.00 per bushel. Market-garden crops are very fair in yield and price. Apples are very poor in this vicinity. Pastures are poor and brown at present, but the recent rains have somewhat revived the grass.

## NORFOLK COUNTY.

*Medway* (MONROE MORSE). — The curculio, codling moth and wire worm are doing the most damage. Indian corn is about 95 per cent of a full crop. Sweet corn is largely siloed, and is a large proportion of the corn grown. Hay was a full crop, of good quality, well cured. Early potatoes will be light, and late ones are needing rain very much. Apples will be a poor crop, pears fair and peaches and grapes good. Pasturage is very short.

*Franklin* (C. M. ALLEN). — Corn is backward, but is growing very fast; 10 or 15 per cent of the crop will be put in the silo. Hay was a full average crop in quantity and of very fine quality. Potatoes are much injured by drought; price from \$1.25 to \$1.60. Market-garden crops have made a very light yield, with price above the average. Apples are a light crop, pears an average one. Peaches set full, but have dropped badly. Raspberries and blackberries are full crops. Pastures are badly dried up. Rye was a full average crop. •

*Millis* (E. F. RICHARDSON). — Potato beetles are doing the most damage. Corn is in good condition; very little will be put into the silo. The hay crop was larger and better than usual. Early potatoes are a fair crop, and sell for \$1.30 per bushel. Market-garden crops have yielded less than usual, but are above the average in price. The prospect is poor for all kinds of fruit. Pasturage is very dry. Rye was about an average crop.

*Medfield* (GEO. R. CHASE). — There is very little trouble from insects. Corn is in splendid condition; not over 5 per cent will be put into the silo. The hay crop was 20 per cent in excess of last year, and the quality was nearly perfect. Both early and late potatoes are in danger of utter ruin from dry weather. Market-garden crops have made the best of yield, and prices have been generally satisfactory. Apples will be a very light crop, pears moderate, peaches none, grapes and cranberries a full crop. Pasturage is in very poor condition.

## BRISTOL COUNTY.

*Mansfield* (D. E. HARDING). — Insects are giving no trouble at present. Corn is looking well, and one-third of the crop will be put into the silo. Hay was a very fair crop and well made. Early potatoes suffered from drought, but later ones are looking fairly well. Market-garden crops have been a good yield, and prices vary little from former years. Apples and pears will be medium crops. Pasturage is rather dry, but is improving. The rye crop was good.



*North Raynham* (N. W. SHAW). — Rose bugs are doing the most damage. Corn is in fair condition; but little will be put into the silo. The hay crop was average in quantity and of good quality. Potatoes look well and early ones brought \$1.00 per bushel. Market-garden crops are not as good as usual in yield, but prices are better. All kinds of fruit will be a light crop. Pasturage is very short because of drought. Rye is not an average crop.

*Dighton* (A. W. PAUL). — Insects are doing less damage than usual. Corn looks well, but is a little late; very little goes into the silo. Hay was a full crop, secured in good condition. Early potatoes are a good crop, and sell for \$1.00 per bushel. There are few apples and peaches; pears and grapes will be fair crops. Market-garden crops have been short and prices low. Pastures have been badly pinched by drought. Rye was a good average crop. All crops need rain.

*Berkley* (R. H. BABBITT). — The white strawberry grub and the cranberry worms are doing the most damage. Corn is looking well; but little of it will go into the silo in this vicinity. The hay crop was good in quality and above the average in quantity. Potatoes have suffered very much from the continued dry weather; price from 90 cents to \$1.25. Market-garden crops are fully up to the average in yield and price. Apples, pears and peaches will be light crops. Cranberries promise a good crop. Pasturage is very poor because of dry weather. Rye has been a good crop.

*Dartmouth* (L. T. DAVIS). — Potato beetles are doing the most damage. Corn is in fair condition, and perhaps one-fourth of the crop will be put into the silo. The hay crop was fully up to the average and secured in first-class condition. Early potatoes are fair, but the late are being badly damaged by bugs; price \$1.00 to \$1.50 per bushel. Some early market-garden crops were not quite as good as in some years, but prices were about the same. The prospect for all fruit is very poor. Pastures are short from lack of rain. Rye was about an average crop.

#### PLYMOUTH COUNTY.

*Brockton* (DAVIS COPELAND). — Corn is backward, but is growing well; 75 per cent of the crop will be put into the silo. Hay was more than an average crop. Potatoes have been injured by dry weather on high land; very few have been harvested, and they have sold for \$1.25 per bushel. Market-garden crops are about average in yield and price. There will be small crops of apples, pears and peaches. Pasturage is short. Rye was an average crop.

*Marshfield* (G. J. PETERSON). — The small striped squash bug and the potato beetle are doing the most damage. Corn is of good color but backward. The hay crop was below the average in this locality. The condition of potatoes is better than last year, and the price has run from \$1.80 to \$1.20 per bushel. Market-garden crops have been and now promise better than last year; prices hold high. Apples are not plenty, pears will be an average crop and peaches and grapes a fair one. Pastures are in better condition than last year. Rye was more than an average crop. Cranberries promise a heavy crop. There is little prospect for a crop of rowen.

*Kingston* (J. H. CUSHMAN). — Potato beetles are doing some damage to late potatoes. Corn is looking well, but is late; very little is put into the silo. The hay crop is larger than usual and of very good quality. Early potatoes were cut short by drought, but late ones are doing well; price \$1.40 per bushel. Garden crops have been about as usual. Apples will be a small crop, with other fruits about as usual. Pasturage holds out well. Rye was about an average crop.

*Halifax* (G. W. HAYWARD). — Potato beetles are doing the most damage. Corn is in fair condition; no silos in town. Hay was about an average crop, secured in fine condition. Potatoes have looked well, but many fields are blasting. Market-garden crops have yielded well, and brought good prices. Apples look well, pears will be a fair crop and grapes and cranberries good crops. Pasturage is in rather poor condition. Rye was an average crop.

*Middleborough* (C. E. WESTON). — The cranberry insects are doing the most damage. Corn is in fair condition; none is put into the silo. The hay crop was of large quantity and average quality. Early potatoes are a good crop, and sell for \$1.00 per bushel; late ones do not promise as well. Market-garden crops are about average in yield and price. Apples, pears and peaches are scarce. Cranberries promise an enormous crop. Pasturage is in very good condition. Rye was not a very good crop.

*Wareham* (A. SAVARY). — The horn fly is very troublesome. Corn is in fair condition; none is put into the silo. The hay crop was large and of good quality. Potatoes are a good crop in all respects. The prospect for fruit is poor for all except cranberries. Pasturage is in very good condition. Rye was a good crop.

#### BARNSTABLE COUNTY.

*Falmouth* (D. R. WICKS). — The fall tent caterpillar and codling moth are doing the most damage. Corn is looking finely; but

one silo in town. Hay was a two-thirds crop, of good quality. Early potatoes are a good crop, but are blasting somewhat; price \$1.25 per bushel. Late potatoes look well. Market-garden crops are fully up to former years in yield and price. Apples will be half a crop; pears, a two-thirds crop; grapes and peaches, good; and cranberries, a big crop. Pasturage never looked better.

*Mashpee.* (W. F. HAMMOND). — Potato beetles are doing the most damage. Corn is looking well; no silos in this vicinity. Hay was an average crop, of good quality. Potatoes are looking well, and the early ones bring \$1.60 per bushel. Market-garden crops have been average in yield, with prices good. Apples and peaches will be small crops, but pears and grapes will be good. Rye was an average crop.

*Barnstable* (JOHN BURSLEY). — Fire worms, span worms and wire worms are doing the most damage. Corn is small for the season; about 3 per cent will go into the silo. The hay crop was about 60 per cent of an average in quantity and of good quality. Early potatoes are yielding well and late ones look finely; prices from 90 cents to \$1.25 per bushel. There are few Baldwins, and other apples are a smaller crop than usual. Pears and grapes are looking well, and cranberries promise unusually well, except a few bogs which have been injured by insects. Pasturage is in good condition. Rye was more than an average crop.

*Dennis* (JOSHUA CROWELL). — Insects have not been quite as plenty as usual, although the horn fly is plentiful and very annoying to cattle. Corn has improved very much recently, but little is put into the silo. Hay was about two-thirds of an average crop; quality excellent. Potatoes are in very good condition, with prices from \$1.00 to \$1.25 per bushel. Apples and pears will be below the average, but cranberries will be a full crop. Pasturage is much better than is usual at this season. Showers have been of frequent occurrence.

*Eastham* (J. A. CLARK). — The horn fly is very troublesome. Corn is looking well. There are no silos in this vicinity. Hay was an average crop in both quantity and quality. Early potatoes are a very good crop; price \$1.00 per bushel; late ones are not so promising. Market-garden crops have been average in yield and price. Apples will be a light crop, but cranberries are looking well. Pasturage is in good condition. The acreage of rye was light, but the crop was good.

#### DUKES COUNTY.

*West Tisbury* (WM. J. ROTCH). — There is no serious trouble with insects. Corn is in fair condition; no silos here. Hay was

a good crop on newly seeded ground, but old meadows were light ; quality good. Early planted potatoes did very well, but those planted later suffered from drought ; price \$1.00 to \$1.25 per bushel. Market-garden crops have yielded well, but the demand has been less than usual. Apples, pears and peaches are scarce, but grapes and cranberries promise a good crop. Pasturage is below average condition. Rye was an average crop.

#### NANTUCKET COUNTY

*Nantucket* (C. W. GARDNER). — The potato beetle is doing the most damage. Field corn is looking finely ; none used for ensilage. Hay was about a two-thirds crop, of excellent quality. Potatoes are a medium crop, with the price from \$1.25 to \$1.50 per bushel. Market-garden crops are very late, and prices very low. Pastures are very dry. Rye was about an average crop.





MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF AUGUST, 1893.

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ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

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BOSTON :

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.

1893.





# CROP REPORT FOR THE MONTH OF AUGUST, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., Sept. 1, 1893.

## PROGRESS OF THE SEASON.

Report No. 107 (August, 1893) of the statistician of the United States Department of Agriculture gives the average condition of corn as 87, against 93.2 for July, a decline of a little over 6 points. This decline is mainly due to the extensive and persistent drought, but, with a sufficient rainfall during the month of August, improvement will not only be possible but assured, over the greater portion of the area.

Spring wheat has fallen off in condition more than 7 points since last month, the average condition being 67, against 74.1 for July. This decline is due to too high rainfall and deficient temperature in the spring-wheat States. Much injury has been done by the chinch bug and rust in several States.

The condition of oats is the lowest reported for many years, being 78.3, against 88.8 in July, a decline of a little over 10 points. In August, 1892, it was 86.2. This low condition is the result of the drought following the cold and wet spring. The drought is general over nearly the entire country, causing the straw to be short and the heads light. Conditions are best in the New England and Atlantic States. Rust is reported in several of the States.

The condition of spring rye stands at 78.5, against 89 in the month of July and 89.8 in August, 1892.

The returns for barley show only a slight decline, the condition being 84.6, against 85.3 in July, and precisely the same as in June. New York and Wisconsin show a considerable falling off in condition, while California made a gain of 3 points.

The acreage of buckwheat is reported at 96.3, as compared with last year, with the condition standing at 88.8.

The condition of cotton is given as 80.4, a decline of a little over 2 points since last month. This is the lowest average for August ever given out by the Department. The present low condition is the consequence of an excess of rain in the early part of the season, followed by hot, dry weather during the month of July. Rust is reported in Alabama, Mississippi and Tennessee, and the bollworm and caterpillar have done more or less damage in Alabama, Louisiana, Texas and Arkansas.

The average condition of potatoes has declined nearly 9 points in the past month, and now stands at 86. This is a low condition so early in the season. This decline is mostly due to the general and severe drought. The yield of early planted potatoes has also been lessened by the drought. The Colorado beetle is partly responsible for the decline in condition in some of the Western States.

The general average for tobacco fell from 93 on July 1 to 82.2 on August 1. In two-thirds of the States in which tobacco is grown to any considerable extent the averages range from 85 upward; but these States are largely outweighed in magnitude of production by the single State of Kentucky, whose average is only 77, while large reduction of condition is noted in Virginia, North Carolina, Ohio, Indiana and West Virginia. The general cause of the reduced condition is drought, though recent relief has been received in some sections from local rains.

The general average condition of pastures has been reduced by deficient rainfall from 94 on July 1 to 82.3 on August 1. The reduction in condition has been general except in some half-dozen States. In some counties in Indiana, Illinois, Wisconsin and Minnesota pastures are so dry that stock must be fed as in winter.

The commercial crop of apples will certainly be very light, the drop having been very severe, and a further decline in condition noted in nearly every State. In many States the crop may be said to be a total failure.

The drought over the eastern portions of the country has somewhat affected the prospects of the peach crop. Early

fruit has ripened prematurely in many sections, affecting the quality quite seriously. Peaches have rotted on the trees to an alarming extent in Georgia, greatly reducing the prospect for the crop. In Ohio and Michigan the conditions have also declined.

The returns show a prospect for a large crop of grapes, especially in sections of commercial importance. The percentages of July have been generally well sustained.

In Massachusetts the average condition of corn August 1 is given as 93; the average condition of oats as 97; the average condition of barley as 98; the acreage of buckwheat as compared with last year as 100, and its average condition August 1 as 94; the average condition of potatoes as 87; the average condition of tobacco as 87; the average condition of timothy as 96; the product of clover compared with a full crop as 90, and its average quality as 96; the average condition of pastures as 87; the average condition of apples as 61; the average condition of peaches as 82; and the average condition of grapes as 93.

#### TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM THE UNITED STATES WEATHER-CROP BULLETINS.]

*Week ending July 31.* — Week warm throughout the Southern States, central valleys and lake region. Normal temperature on the middle Atlantic and New England coasts, and slightly cooler than usual in the Dakotas, in California, and over the central plateau regions. Rainfall slightly in excess from western Pennsylvania and Virginia westward over the southern portions of Ohio, Indiana and Illinois, and westward to Colorado. From the lake region westward to Minnesota and Dakota the rainfall was less than usual, general showers along the Atlantic coast relieving the local drought. General showers have greatly improved grass on the cattle ranges.

*Week ending August 7.* — East of the Mississippi nearly normal temperature conditions prevailed, with the temperature slightly in excess over portions of the lower Ohio valley and the lower lake region. West of the Mississippi it was decidedly warmer than usual from Minnesota westward over Montana, and decidedly cooler than usual over the south-

western sections. On the Pacific coast it was slightly cooler than usual. More than the usual amount of rain fell throughout the Southern States and in New England, with the exception of Maine. Less than the usual amount of rain fell from the middle Atlantic coast and lower lakes westward to the Rocky Mountains, including the principal corn-producing States. Drought conditions are now general in the central valleys, north-western States, and in portions of the middle Atlantic States and lake region. Upon the whole, the weather conditions have been favorable to crops in New England, portions of the middle Atlantic States, and generally throughout the Southern States.

*Week ending August 14.* — Slightly warmer than usual in portions of the lake region and New England, but excess of temperature generally slight. Throughout the central valleys, middle and south Atlantic and Gulf States normal temperature conditions prevailed. From the upper Missouri valley westward to the Pacific coast it was cooler than usual. More than the usual amount of rain fell in Utah, Arizona and New Mexico, and generally throughout the south Atlantic and Gulf States. Except over limited areas there was a general deficiency in rainfall from the central and upper Mississippi valleys eastward to the Atlantic coast. Little ploughing for fall seeding has yet been done. Light frost occurred in Minnesota and Wisconsin on the 12th, and in New England on the 14th.

*Week ending August 21.* — Week warmer than usual on the Gulf coast in Texas, Alabama and the extreme northwest. Over the central valleys and lake region, and generally over the region to the east of the Mississippi, the week was slightly cooler than usual. Cool weather continued on the Pacific coast. Over the States of the central Mississippi valley, and from the lake region southward to Florida, there was a general deficiency in rainfall. In the extreme northwest the week has been dry, and the weather has been especially favorable for harvesting and thrashing, but all growing crops are in need of rain. Drought has been completely broken in New England and over a considerable portion of the middle Atlantic States.

*Week ending August 28.* — Week warm in all districts east of the Mississippi and in Texas, also on the north Pacific coast and in the interior of California. Excess greatest in the interior of New England, middle Atlantic States, eastern Tennessee and lower Michigan. Cooler than usual in the Missouri valley and Rocky Mountain districts. Crops generally improved west of the upper Mississippi, while conditions were unfavorable in the Ohio valley and in Tennessee. Week dry throughout central valleys. Crops much in need of rain from Lake region southward to the east Gulf coast. Excessive rains occurred over the south Atlantic States and over the greater portion of New England and the middle Atlantic States, the rains having been accompanied by severe gales attending the West India hurricane which passed inland from Florida to northern New England. Great damage done to growing crops in eastern Georgia, South Carolina, and portions of North Carolina and Virginia.

#### NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETINS.]

*Week ending July 31.* — Temperature slightly above in eastern Maine, deficient in Vermont and normal elsewhere; haying about finished; corn not doing well; fruits falling from trees in many places.

*Week ending August 7.* — Temperature and sunshine above normal; little rain, except in some central districts; drought very serious, and most crops suffering; light frost on 14th, no damage reported; grain harvest going on, and good yield promised; corn growing fast.

*Week ending August 14.* — Temperature and sunshine below normal, and rainfall above in all coast sections; weather favorable for grass, roots and seeding; fruit prospects poor; corn outlook unfavorable in some sections.

*Week ending August 21.* — Rainfall excessive in all sections except Maine; hail did much damage to corn in many places on the 17th; the rain will be of great benefit; apples and pears still continue to fall from trees.

## MASSACHUSETTS WEATHER.

*Meteorological Data for August, 1893.*

[Furnished by the New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Clear.	Partly Cloudy.	Cloudy.
Adams, .	67.6	91	11	42	14, 15	—	—	S.W.	15	—	16
Gt. Barringt'n	68.0	91	10, 11	42	14	5.44	7	—	—	—	—
Springfield, .	72.3	93	10	49	14	3.12	12	—	—	—	—
Amherst, .	68.4	94	10	40	14	3.09	12	N.W.	17	8	6
Fitchburg, .	68.6	94	10	46	14	8.95	12	N.W.	12	7	12
Worcester, .	68.7	90	10	50	14	3.27	13	S.W.	11	8	12
Dudley, .	—	—	—	—	—	—	—	—	—	—	—
Frammingham,	69.3	93	10	46	14, 31	5.38	9	—	—	—	—
Concord, .	68.4	92	10, 25	43	3	6.15	13	S.W.	5	13	13
Lowell, .	71.0	97	10	49	14	—	—	S.W.	5	16	10
Boston, .	69.6	93	25	53	14	6.46	13	N.W.	9	14	8
Taunton, .	70.5	91	12, 26	43	31	6.46	9	—	11	7	13
New Bedfd,	—	—	—	—	—	—	—	—	—	—	—
Hyannis, .	73.3	91	11, 12	55	14, 31	5.39	12	—	—	—	—
Provincet'n, .	69.2	85	26	55	3	4.37	9	N.W. S.E.	10	12	9

*Summary.*

*Temperature* (F.). — Monthly mean,  $69.6^{\circ}$ ; highest monthly mean,  $73.3^{\circ}$ , at Hyannis; lowest monthly mean,  $67.6^{\circ}$ , at Adams; maximum,  $97^{\circ}$ , at Lowell, 10th; minimum,  $40^{\circ}$ , at Amherst, 14th; greatest local monthly range,  $49^{\circ}$ , at Adams, Great Barrington and Concord; least local monthly range,  $30^{\circ}$ , at Provincetown; greatest daily range,  $42^{\circ}$ , at Concord, 3d; least daily range,  $2^{\circ}$ , at Lowell, 21st. Average temperature for August at Springfield for twenty-six years,  $70.6^{\circ}$ ; average for August, 1893,  $72.3^{\circ}$ ; departure,  $+1.7^{\circ}$ . Average temperature for August at Boston for twenty-three years,  $68.5^{\circ}$ ; average for August, 1893,  $69.6^{\circ}$ ; departure,  $+1.1^{\circ}$ .

*Precipitation.* — Average, 5.28 inches; greatest, 8.95, at Fitchburg; least, 3.09, at Amherst. Average for August at Springfield for forty-six years, 4.53; for August, 1893, 3.12; departure,  $-1.41$ . Average for August at Boston for

twenty-three years, 4.47 ; for August, 1893, 6.46 ; departure, +1.99.

*Prevailing Wind Direction.* — South-west.

*Thunder-storms.* — 1st, 6th, 7th, 12th, 13th, 18th, 19th, 25th, 27th, 28th.

*Aurora.* — Concord, 15th.

*Light Frost.* — Great Barrington, 14th ; Adams, 23d, 31st.

*Hail.* — Fitchburg, 7th, 27th ; Concord, 7th.

*Meteors.* — Concord, 10th.

*Excessive Precipitation.* — Fitchburg, 27th, 3 inches in 1 hour and 45 minutes.

### *Remarks.*

The month of August will long be remembered as one of numerous storms, local and general, of unusual severity. The thunder-storms were severe but not frequent. The storm of the 6th was almost a tornado in the vicinity of Taunton ; hailstones  $\frac{1}{4}$  inch thick and  $\frac{3}{4}$  inch in circumference accompanied this storm, breaking glass and beating down the crops ; barns and outbuildings were blown down and otherwise damaged, and trees were twisted off. At Lynn the damage by lightning and flood has been estimated at \$75,000. The storm of the 20th was severe on the coast, and more or less damage was done to shipping. On the 24th a very severe storm prevailed with high easterly gales ; at Boston the maximum velocity was 46 miles. Much damage was done in the vicinity of New York City and many lives were lost. The storm of the 29th was probably the worst August storm that has occurred in this section of the country for many years. Although much more destructive to life and property in the Southern States it did many thousands of dollars' damage in New England and the north-east. The rainfall was moderate, except in western portions of the State, but the wind was very severe, ranging from 30 to 50 miles during the day, with an extreme velocity at Boston of 75 miles from the south-west at 4.12 P.M. Many small vessels and yachts were washed ashore and completely wrecked, but thus far no loss of life has been reported.

In the circular to correspondents returnable August 29 the following questions were asked : —

1. What insects are doing the most damage in your locality?

2. What is the condition of pasturage and the prospect for rowen?

3. What has been the yield of early fruit crops, and what is the prospect for later ones?

4. What is the prospect for potatoes?

5. What has been the yield of market-garden crops during the past month, and what is the prospect for those yet to come?

6. What is the prospect for the corn crop?

7. How have barley and oats compared with last year's crop?

8. What is the condition of and prospect for the tobacco crop?

Returns have been received from one hundred and sixteen correspondents, and from them the summary given below has been made. It should be borne in mind that the majority of these returns came in before the storm of August 29 had developed its strength, and therefore not much mention was made of damage done by that storm. Allowance should be made for this in considering both the notes of correspondents and the summary.

#### INSECTS.

The damage to crops from insects during the past month approaches nearly to the minimum in most sections. Those most frequently mentioned as doing the most damage were grasshoppers and the potato beetle. Several correspondents reported that the potato beetle was injuring tomato vines severely. In Barnstable County grubs are attacking grass roots in meadows, and in some towns the rowen crop suffered severely from this cause. Other insects mentioned as doing damage were the horn fly, wire worms, cabbage worms, muck worms, cranberry insects, the fall web worm, the codling moth, white grubs, tomato worms, the squash bugs and the spittle insect. Eight correspondents reported the presence of the horn fly, but it is thought that this insect is not nearly so troublesome as a year ago.



## PASTURAGE AND ROWEN.

Pasturage can hardly be said to be in average condition in any portion of the State. While some correspondents in the eastern counties speak of it as either good or fair, others speak of it as short, very short, or poor. In Worcester County and the four western counties the condition is even worse, only one correspondent in the five counties calling the condition good. Most often it is referred to as either short or very poor. The long-continued drought is of course the cause of this condition, but it is hoped that the recent rains, having effectually broken the drought, will improve the condition of fall feed.

The rowen crop is in much the same condition and while it will be good in some eastern localities it will be either light or very light in others. In central and western sections it may be considered as almost a total failure, the recent rains coming too late to help it materially.

## FRUITS AND BERRIES.

Early fruits were a fair crop in most sections, and excluding early apples might even be called an average crop. Late fruits, with the exception of apples, promised well until the storms of the past week. Apples, which previous to these storms were a very short crop, may now be considered almost a total failure, most of those then on the trees having been blown off. Peaches were somewhat affected by the severe drought and will hardly fulfil the promise of a month ago. Grapes generally promise a good crop. Wild berries suffered severely from drought. Cranberries promise a good crop, and picking has begun in some sections.

## POTATOES.

Potatoes suffered severely from drought and will hardly be an average crop. Many correspondents refer to the crop as light or very light. While some particular localities report good crops, for the State in general a fair crop is all that can be expected; quality is, however, as a rule, excellent, and little blight or rot has been reported.

## MARKET-GARDEN CROPS.

The yield of market-garden crops during the past month has been, on the whole, only fair, the dry weather having affected them somewhat. The prospect for later ones is, however, much better, and good crops are now promised. Celery promises well, as do also cabbages and squashes. The onion crop is generally good.

## CORN.

Corn suffered less from the drought than most crops, and before the heavy winds of the past week promised to be nearly, if not quite, an average crop. Much damage was done by these winds, and it is doubtful if the crop fully recovers. It is hoped, however, that with good weather and an open season a nearly average crop will be secured.

## BARLEY AND OATS.

These crops were on the whole rather better than last year, and may be considered as full average crops. Oats made an especially favorable showing. There was little complaint of smut or rust.

## TOBACCO.

Tobacco will not generally be an average crop though a few correspondents speak of it as making a good growth. The crop suffered severely from drought, and the recent high winds also damaged it materially. The quality is also hardly expected to be up to the average, and the crop will generally fall short in all respects of that of 1892. The only damage reported from hail is in Southampton, where from twelve to fifteen acres were badly cut.

## IN GENERAL.

In general the month cannot be called a favorable one for the farmer, as the drought was continuous and severe in most sections, and the heavy storms of the latter part of the month, while effectually breaking the drought, did much damage to growing crops.

## NOTES OF CORRESPONDENTS.

(Returned to us August 29.)

## BERKSHIRE COUNTY.

*Egremont* (J. H. ROWLEY). — Little damage from insects; cabbage worm doing the most. Pastures are short and dry, but early cut meadows will have a fair crop of rowen. Early fruit crops made about an average yield; later will be about half a crop. Potatoes will be about half a crop. Market-garden crops made a good yield, and promise well for the future. Corn will not be as good a yield as last year. Barley was a good crop, but oats were about a two-thirds crop. Storm on the 29th injured corn fields.

*Monterey* (WM. S. BIDWELL). — No special damage from insects. Pastures poor; not much rowen. Nearly all kinds of fruit are good crops. Potatoes promise a good crop. The prospect for the corn crop is poor. Oats are a better crop than last year. Tobacco promised well, but is now in bad condition. Corn and tobacco were seriously damaged by the high wind of the 29th; ensilage corn was torn up by the roots in some places.

*Richmond* (O. F. SMITH). — Grasshoppers are doing the most damage. Pasturage is in very poor condition, and the prospect for rowen is not flattering. Early fruit crops were pretty good, but later ones will not be more than fifty per cent of a crop. Potatoes will be about half a crop. Market-garden crops are in fair condition. Corn will be about sixty per cent of a crop. Barley and oats compared favorably with last year's crop. The weather has been too dry for all crops.

*Dalton* (W. B. BARTON). — Cabbage worms are working badly. Pasturage is short, and the prospect for rowen poor. Raspberries were a large crop, but blackberries were not as good. Drought has injured potatoes badly. Market gardens are about an average. Corn is late, but with a late season will be a good crop. Oats are a good crop. Apples have dropped badly.

*Cheshire* (L. J. NORTUP). — The horn fly and grasshoppers are doing the most damage. Pastures have improved since the rains;

but little rowen. Early fruits made a fairly good yield, but later ones have been damaged by the high winds. Late potatoes suffered from drought, and there is some rot. Turnips are looking finely. Most pieces of corn are looking well. Oats are rather better than last year.

#### FRANKLIN COUNTY.

*Rowe* (J. F. BROWN). — Pastures are in good condition, but rowen is poor. Early fruits were a small crop, and the prospect is the same for later ones. Potatoes will be a small crop, of good quality. Market-garden crops are about an average in yield and condition. Corn looked well until August 24, when the heavy winds injured it badly; about two-thirds of a crop now promised. Barley and oats are about an average crop.

*Ashfield* (CHAS. HOWES). — Grasshoppers are quite thick in pastures and meadows. Feed is short, and there will be a short crop of rowen. Apples are not an average crop; late winds blew off much fruit. Potatoes have improved, and will be about an average crop. Market-garden crops are good. Corn is badly blown down, but except where injured by wire worms in the spring is a good growth. Barley and oats are very good crops. Some are harvesting tobacco, and another week of good weather will give a good crop.

*Deerfield* (CHAS. JONES). — No damage is being done by insects. Pasturage is dry and short, and rowen will be a light crop. Early fruit crops were fair, and late ones promise fairly. Potatoes are of good quality, and generally a fair crop. Market-garden crops are good except on very dry land. Corn promises to be a good crop. Rye and oats have been an average crop. Tobacco is a heavy crop, and of good quality. Onions are above the average. Apples are a very short crop, and are falling badly. Grapes look well, but are rather late.

*Sunderland* (J. M. J. LEGATE). — Very little damage from insects this season. Pasturage is short, and there will be very little rowen cut. Early fruit crops were good, but later ones, especially apples, are dropping off badly. Potatoes are more than an average yield, and of very good quality. Corn promises to be more than an average crop. Onions will be more than an average crop. Tobacco is late, and has been badly pinched by drought, though the late showers have improved it somewhat; good pieces are the exception, and the crop will probably lack in quality.

*Orange* (ANSEL HARRINGTON). — Grasshoppers are doing most damage, and potato beetles are eating tomatoes somewhat. Pasturage is short, and rowen not over two-thirds of an average

crop. Blueberries and blackberries yielded fairly well, but other fruits were short. Potatoes are a light crop. Market-garden crops are rather light, on account of drought and frost. Corn is rather below an average crop. Barley and oats are about as last year. There was a hard frost here on August 14, which nearly ruined vines and some tender vegetables.

#### HAMPSHIRE COUNTY.

*Pelham* (J. L. BREWER). — Pastures are very short, and the rowen crop light. Huckleberries and blackberries are very scarce. Potatoes are a fair crop, except on very light soil. Corn promises to be a fair crop. Oats were a good crop. Tobacco is late, but looks well. The high wind August 29 did much damage. Apples promised to be twenty-five per cent of a full crop, but the winds have reduced them to about ten per cent.

*Belchertown* (H. C. WEST). — There is no feed in pastures, and not a ton of rowen in town. Small fruits were a fair crop, but apples, pears, etc., have been injured by the drought. Potatoes will be a much better crop than was expected. Corn is late, but the recent rains have improved it so that it now promises to be a fine crop. Barley and oats were better crops than last year. Winter apples were badly blown off by the recent winds.

*Northampton* (D. A. HORTON). — Pastures are badly dried up; many are feeding from the barn. There is no rowen. Fruit crops are a fair yield, though the high winds are injuring them. Potatoes are about an average crop so far as harvested. Corn will not be over two-thirds of an average crop. Some tobacco is being harvested, but the prospect is that the crop will not be much over one-half that of last year, and it will probably be of inferior quality. The drought has been severe here.

*Chesterfield* (HORATIO BISBEE). — No insects are doing material damage. Pastures are very short, and there will be practically no rowen. Early fruit may have been an average, but late fruit must be light. Potatoes promise to be a poor crop. Corn will be a poor crop. Nearly all the oat crop was cut for fodder. This locality has suffered severely from drought.

*Goshen* (ALVAN BARRUS). — Grasshoppers are doing the most damage. Pastures are in fair condition where not overstocked; rowen is nearly a failure. Fruit crops have been and will be light, as a rule; apples were badly blown off by the late winds. Potatoes will be of fair quality and a nearly average yield. Many fields of corn were injured by drought, while all are badly beaten down by the late storms; there will hardly be a two-thirds crop.

## HAMPDEN COUNTY.

*Tolland* (F. T. MOORE). — Grasshoppers are doing the most damage. Pastures are badly dried up, and the rains came too late to help the rowen crop. A light crop of huckleberries is about all the fruit in this section. The storm of last week blew off what few apples there were. Potatoes are a very light crop; no rot yet. Corn will be much below an average crop. Barley and oats are not as good crops as last year. The tobacco crop is very light and of poor quality.

*Agawam* (R. DE WITT). — Very few insects this year. Pasturage in very poor condition. There are few apples, pears and peaches; the big storms injured the apples and pears. Potatoes are below an average crop. Many pieces of corn must have been hurt by the drought. Oats are a splendid crop. Many pieces of tobacco were injured by the drought.

*Chicopee* (R. W. BEMIS). — The fall web worm is doing the most damage. Pastures have been quite dry, except on low ground. The yield of early fruit was fair, but late fruits have fallen badly. Early potatoes are a fair crop. Market-garden crops have suffered from dry weather, but on the whole have been fair crops. Corn is not quite up to the average, owing to drought. Barley and oats are not quite so good crops as last year.

*Ludlow* (CHAS. B. BENNETT). — Late web worms are very plenty. Pastures are all dried up, and there will be but little rowen. The dry weather injured the early fruit crops, and nearly destroyed the late. Early potatoes are a fair crop, but late ones are almost a failure. Corn is improving, but will not be heavy. Oats are a very good crop. Little tobacco is raised, but what there is looks very well.

*Hampden* (JOHN N. ISHAM). — Grasshoppers are doing the most damage. Pastures are short, and there is very little rowen. Early and fall apples are a good crop, winter apples small crop, grapes and peaches good, and pears and plums light. Potatoes will be a short crop. Cabbage and onions are doing well on moist land; turnips are a poor crop. Corn will be a small crop, because of failure to ear properly. Oats were an average crop. Few fields of tobacco are up to the average.

## WORCESTER COUNTY.

*North Brookfield* (J. H. LANE). — The cabbage worm is doing the most damage. Pastures are very short, and rowen not more than one-tenth of a crop. Early apples are about half a crop, late ones one-fourth, with pears about one-half. Potatoes are about

half a crop, having suffered from drought. Market-garden crops have suffered severely from drought. The yield of corn is not yet certain, as it is not eared out, but at present the crop is below the average. Barley and oats are better crops than last year. Much fruit fell during the high winds.

*New Braintree* (C. D. SAGE). — Grasshoppers are doing the most damage. Pastures and mowings were badly scorched by drought. Early fruit was quite plenty; the storm of August 24 has shaken a large quantity of fruit from the trees. Potatoes have suffered from drought, but may be half a crop. Market-garden crops have suffered from drought, as has also the corn crop. Barley and oats were fully average crops.

*Templeton* (LUCIEN GOVE). — Potato beetles and grasshoppers are doing the most damage. Pastures are short and the rowen crop very light, but fall feed will be good. Peaches are a good crop, but pears, apples, plums and cherries are very light. Early potatoes were a light crop, but late ones will be much better. Market-garden crops are a full average, and the outlook is good for all except cabbages. Corn promised well until August 23 when the high wind greatly injured it. Barley and oats were heavy crops, but smut was somewhat prevalent.

*Westminster* (JOSEPH HAGER). — Pastures were never so brown at this season, and there is no rowen of any consequence. Early fruit was a very poor crop, and the later is worse; apples few and very poor. Potatoes will be about half a crop. Market-garden crops are a light yield. Corn will be about half a crop, and of poor quality. Barley and oats were not so good crops as last year. The severe drought has only been broken within a week.

*North Leominster* (PRESTON KNIGHT). — Grasshoppers are doing the most damage. Pastures are short and dry, and rowen a short crop. Pears are plenty, but apples are a short crop, of poor quality. Late potatoes were a good yield on some fields, and perhaps half a crop on others. Corn will not be quite an average crop. Barley and oats were considerably better crops than last year.

*Holden* (G. S. GRAHAM). — Grasshoppers are doing the most damage. Pastures are very dry, and rowen a very light crop. Strawberries and blackberries were plenty, pears are plenty and apples very few. Potatoes will be about half a crop. Market-garden crops are very poor. Corn will be about half a crop. Barley and oats are not half of last year's crop.

*Worcester* (S. A. BURGESS). — Grasshoppers, apple worms and grubs are doing the most damage. Pasturage is poor, and rowen is a poor crop. Pears are a good crop, apples poor and peaches

fair. Potatoes will be a fair crop, better than was expected. Market-garden crops are poor, but the prospect for later ones is better. Corn is improving, and promises to be a good crop. Oats were a good crop, and barley poor.

*Sutton* (O. P. JOHNSON). — No insects are doing any particular damage. Pastures are very dry, and rowen poor. Fruit is a good crop, with the exception of apples. Late potatoes are a good average crop. Market-garden crops are hardly an average in yield. Corn promises to be a good crop. Barley and oats are not up to last year's crops.

#### MIDDLESEX COUNTY.

*Framingham* (H. S. WHITTEMORE). — Potato beetles are doing the most damage, but not as much as usual. Pasturage is very poor, and rowen is but a small crop. Early fruit crops fair, apples a light crop of poor quality, pears good. Potatoes not over half a crop. Yield of market-garden crops fair, and prospect good. Rains have improved corn, and it promises well. Oats and barley are cut for fodder, and have been good crops.

*Westford* (ARTHUR WRIGHT). — Little damage from insects. Pasturage and rowen are very good. Strawberries and raspberries were good crops, but blackberries are a short crop. Early potatoes were a good crop, and late ones are looking well. Market-garden crops have made a good yield, and promise well for the future. Corn is looking finely, with the prospect of more than an average crop.

*Lowell* (C. L. MARSHALL). — White grubs are eating potatoes badly. Pastures are good, but the rowen crop will be short. Early fruits have been good, but the late ones dropped badly, and will be short. Potatoes look better than a month ago, and will be a fair yield. Market-garden crops have made a good yield. Corn will be an average crop. Oats and barley were much injured by drought.

*Woburn* (W. H. BARTLETT). — Potato beetles and black squash bugs are doing the most damage. Pasturage is in fair condition, and the prospect for rowen is good. Small fruits have done poorly, and half the winter fruit has been blown from the trees. Early potatoes yielded poorly, but late ones are looking well. Corn will be a good crop if weather is favorable. Root crops are doing well.

*Arlington* (W. W. RAWSON). — No damage from insects. Pasturage and rowen are in good condition. Fruit crops are small. Potatoes are a good crop. Market-garden crops have been small, but the prospect is good for fall crops. The celery and cabbage crops are good, as are also squashes and roots of all kinds.



*Newton* (OTIS PETTEE). — Since the heavy rains pasturage has much improved, and the prospect is for a good crop of rowen. Early apples and pears made fair yields, but the recent gales have blown off much late fruit. Corn has a fine start, but it has been greatly injured by the gales and beating rains of late.

#### ESSEX COUNTY.

*Haverhill* (EBEN WEBSTER). — Grasshoppers and fall web worms are doing the most damage. Pasturage is good, and the prospect for rowen is good. Early fruits were a very fair yield, late apples are scarce, but pears are a good crop. Potatoes are not quite up to an average crop. Market-garden crops have been very fair, and are looking well now. Corn is about an average crop.

*West Newbury* (J. C. TARLETON). — Potato beetles are doing the most damage. Pasturage and rowen are in very good condition. Apples are a very small crop, but pears are good. Potatoes are a good crop, but there is a little complaint of rot. Market-garden crops are very good. Corn is a little late, but is growing fast.

*Rowley* (T. P. HALE). — Grubs are eating potatoes badly. Pasturage and rowen are in good condition. Early fruits were not half a crop, and late ones will be light. Potatoes are a fair crop, though attacked by blight. Market-garden crops have made a fair yield, with good prices. Corn will be a good crop if September is a dry month. Salt hay is being damaged by the rains now prevalent.

*Ipswich* (O. C. SMITH). — The fall web worm is doing the most damage. Pasturage is good now, and rowen will be sixty per cent of an average crop. Cultivated fruits have been fair crops, apples will be a light crop and pears a large one. Late potatoes will be a three-fourths crop of good quality. Market-garden crops have had full average yields, and fall crops promise well. Corn promises very nearly a full crop, and the quality will be excellent if there are no early frosts. Barley and oats were about ten per cent better crops than last year. The cranberry crop will be about an average.

*Marblehead* (WM. S. PHILLIPS). — Pasturage has improved twenty-five per cent, but rowen does not look very well. Some fields of late potatoes are looking excellently. Market-garden crops have been fully up to the average, and those now in the ground promise fully as well. Barley and oats were about average crops. The recent storms have somewhat injured the ensilage fields, and shaken off about all apples and other fruits.

## NORFOLK COUNTY.

*Millis* (E. F. RICHARDSON). — The spittle insect and potato beetle are doing the most damage. Pasturage and rowen are in poor condition. Early fruits made a good yield, but later ones will be poor. Potatoes promise a fair crop. Market-garden crops have made a fair yield. Corn will be a good crop. Barley and oats were fully as good crops as last year.

*Franklin* (C. M. ALLEN). — Insects are not doing much damage. Pasturage is short, and rowen will be a light crop. Fruit crops will make an average yield. Potatoes are a very light crop. Market-garden crops have made a very light yield the past month, but promise well for the future. Corn will be a full average crop. Barley and oats were a little better than last year. Peaches are a heavy crop.

*Medfield* (GEO. R. CHASE). — Potato beetles are doing a little damage. Both pasturage and rowen are poor, because of drought, but both have been improved by the rain of August 24. Early fruit crops were average, but late ones will be below the average. Potatoes promise to be a poor crop, though some may be improved by the rains. The prospect for market-garden crops is below the average. Corn will be ten per cent above an average crop. Barley and oats were rather below last year's crops, and were raised exclusively as fodder.

## BRISTOL COUNTY.

*Attleborough* (ISAAC ALGER). — Pasturage and rowen are in good condition. Early fruits have been abundant, but apples will be a small crop. Potatoes will be a fair crop. Market-garden crops have yielded fairly during the past month, and the prospect is good for those yet to come. Corn will be a very good crop. Barley and oats are an average crop.

*Taunton* (C. H. WILMARTH). — Pasturage is in good condition, and rowen promises to be a good crop. The yield of early crops was above the average, but the prospect for late ones is bad. Potatoes will be about an average crop. Market-garden crops have made a good yield, and promise well. Corn is not an average crop, because of damage from severe gales. Barley and oats are about the same as last year.

*Somerset* (JOSEPH GIBBS). — White grubs are doing the most damage. Late rains have improved the pastures, but very little rowen will be cut. Small fruits were about a three-fourths crop, but recent gales have blown off nearly all the apples and pears. Potatoes will be about a three-fourths crop. The long drought

has reduced the yield of all garden crops. Corn bids fair to be a good crop. Barley was twenty-five per cent less than last year, and oats about the same.

*Westport* (A. S. SHERMAN). — The tomato worm is doing the most damage. Pasturage is very short, and there is no rowen worth mentioning. Yield of early fruit fair; late pears very good; late apples very scarce, and of poor quality. Potatoes will be a good crop. The yield of market-garden crops has been good, with good prospects for the future. Corn is a very good crop, of large growth and good color. Oats and barley were about an average crop.

*Fairhaven* (F. C. LYON). — Pasturage is poor except on low land, but rowen is good on well-dressed meadows. The early fruit crop was good, but the recent gales have blown fully half the late fruit off. Market-garden crops have been a fair yield for the season. But for the late rains corn would have been slim, but the high winds accompanying them laid much of it flat.

#### PLYMOUTH COUNTY.

*West Bridgewater* (F. E. HOWARD). — Potato beetles and squash bugs are doing the most damage. Pasturage is in good condition, and the rowen crop will be fairly good. Early fruit crops were quite good, but later ones will not do so well. Potatoes will not be an average crop. Market-garden crops have been about an average in yield, and the prospect is for average crops to come. Corn will probably be about an average crop. Oats and barley compare favorably with last year's crop.

*Hanson* (F. S. THOMAS). — Apple worms are doing the most damage. Pasturage and rowen are in fairly good condition. Early fruits were good, but late ones will be poor. Potatoes promise a good crop. Market-garden crops have made a good yield, and promise well. Corn will be a good crop if it recovers from the effects of the recent gales. About all the fruit has been blown from the trees.

*Kingston* (JAS. H. CUSHMAN). — There are no insects doing damage. Pastures are getting quite dry, but rowen is looking well on low ground. Early fruit has been quite plenty, and late fruit will be about an average crop. Potatoes are not a large crop, but are of excellent quality. The yield of market-garden crops during the past month has been good, but those to come have been much damaged by storms. Corn does not look very promising, the high winds having injured it badly. Oats have been better in quantity and quality than last year.

*Lakeville* (ELBRIDGE CUSHMAN). — We have had abundant rains, so pasturage and rowen are in very good condition. Wild fruit has been an average crop, as have early apples and pears, but late fruit will yield a small crop. Potatoes are hardly an average crop. Market-garden crops have made a good yield, and promise well. Corn will be more than an average crop, though the recent high winds have injured it somewhat. Oats have been a good crop.

*Wareham* (A. SAVARY). — The horn fly and the squash vine borer are doing the most damage. Pasturage and rowen are both in very good condition. Early fruit was fair, but there will be no late fruit. Potatoes will be a good crop. Market-garden crops are about an average. Corn was injured by the late winds. The cranberry crop promises to be large, and picking has commenced.

#### BARNSTABLE COUNTY.

*Falmouth* (D. R. WICKS). — Grubs are eating grass roots in meadows and pastures. There is very little rowen, but pastures are starting well. There has been very little early fruit, and late will also be a very small crop. Much fruit was blown off by the recent winds. Potatoes were never a better crop. Market-garden crops have been fair, and are still good. Corn has been badly broken down by wind.

*Sandwich* (J. R. HOLWAY). — Grass land has been badly eaten by the white grub. Rowen and pastures are in good condition. Early fruits were very plenty, but late fruit will be scarce. Potatoes are a good crop of good quality. Market-garden crops have been very good. Corn has been badly blown down and broken by wind, but will be a fair crop. The cranberry crop is late, but promises to be large.

*Mashpee* (W. F. HAMMOND). — Fruit worms in cranberry bogs, wire worms in corn and grubs in meadows are doing the most damage. Pasturage is fair, but rowen is poor because of the grubs. Early fruit was a good crop, and late is looking well. Potatoes have done well. Market-garden crops have done better than was expected, and bid fair to be a good yield. Corn will be less than an average crop, on account of worms eating the corn in the husk and at the root. Barley and oats were fair crops.

*Eastham* (J. A. CLARK). — Insects are not doing any particular damage. Pasturage and rowen are in good condition. Apples were a light crop, and the greater portion of those on the trees have blown off. Most early potatoes are dug and sold. The acreage of late turnips is large, and the crop looked finely until the blight struck the earliest-planted pieces a few days ago.

## NANTUCKET COUNTY.

*Nantucket* (CHAS. W. GARDNER). — Potato beetles and the striped squash beetle are doing the most damage. Pasturage and rowen are beginning to look better since the rains. Potatoes are about a two-thirds crop, but the quality is first rate. Market-garden crops have made a very fair yield, and look very promising. Corn has been badly damaged by the recent gales.



SERIES OF 1893.

BULLETIN No. 5.

MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF SEPTEMBER, 1893.

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ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

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BOSTON :  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1893.





## CROP REPORT FOR THE MONTH OF SEPTEMBER, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., Oct. 1, 1893.

Attention is called to the fact that with the issue of September 25 the weekly crop bulletins of the New England Weather Service ceased for the season. It is expected that these bulletins will be sent to those upon our mailing list with the coming of the next growing season.

### PROGRESS OF THE SEASON.

In Report No. 108 (September, 1893) the statistician of the United States Department of Agriculture gives the condition of corn as 76.7, being a decline of a little over 10 points from the August, and over 16 points from the July, report. The condition for the same month in 1892 was 79.6, or nearly 3 points higher. There has been a general decline in condition throughout the country, caused by the widely prevailing drought. The change is marked in nearly all the States of surplus production.

The condition of wheat, considering both spring and winter varieties, when harvested, was 74, against 85.3 in 1892. This is the lowest average since 1885, when it was 72. In the New England, eastern and most of the southern States, and also in Ohio, the crop was harvested in good condition and the yield averaged well.

The general average of condition for oats is 74.9, against 78.9 in 1892. The season has been unfavorable from early spring, and the long-continued drought caused a constant decline until harvest. Rust, grasshoppers and the army worm are reported to have damaged the crop in localities.

The average for rye is the lowest September average given out for years, being 82, against 88.5 last year and 95.1 in

1891. The cause of the low condition is the continued drought during the spring and early summer.

The returns for barley show a slight falling off in condition since last month, the general average being 83.8, against 84.6 in August and 87.4 last year.

The September average for buckwheat stands at 77.5, against 88.8 last month and 89 last year. The present condition is the lowest since 1881, when it stood at 72.

The average condition of potatoes is 71.8, against 86 for August, a decline of over 14 points. The September condition has been lower in the last decade in but two instances, 1887 and 1890, while a loss of such magnitude in a single month is clearly the result of very general adverse conditions. Foremost of these is the drought which has prevailed generally over the country during the month. The beetle has also been more destructive than usual, owing to the weakened vitality of the plants, and excessive heat has caused considerable rust. The crop is undoubtedly cut short. The average condition is lower now than any *October* condition in the last dozen years, except 1887, 1890 and 1892.

There has been a decline of nearly 10 points in the condition of tobacco, making the September condition 72.3, which is lower than for several years past. The range is from 54 in Ohio to 100 in Florida. The general cause of the low condition is the long-continued drought which has prevailed over an unusually large tract of country. Some localities report damage from the tobacco worm.

The almost unprecedented storm of August 28 and 29 spread disaster through those localities where good or abundant crops of apples and peaches were promised, and the percentages are much reduced in all sections. Much damage was done to orchards by the uprooting and splitting of trees. The product so far has been below the standard in quality, owing to the excessive dry weather. Grapes continue to promise well, the conditions are generally high in the districts of commercial production, and but little damage from rot is reported.

The condition for cotton is reported as 73.4, a loss of 7 points. This is the lowest September condition since 1881, when it stood at 70. In addition to unfavorable weather

conditions, among which drought has been prominent, the crop has suffered from insect enemies, rust, second growth, sprouting and rotting of the bolls, and too rapid opening.

The area from which clover seed will be harvested is nearly 10 per cent less than last year, being 90.3. The most general cause of reduced condition is drought, which has been severe and prolonged in many localities.

Pastures have been materially benefited by recent rains in most of the Atlantic coast States, and in portions of West Virginia, Tennessee and Ohio. In the greater part of the lake region, the lower part of the Ohio valley and in the Mississippi valley the general condition is one of deficient moisture, and in many localities the pastures are almost burned up.

In Massachusetts the average condition of corn September 1 is given as 86; the average condition of rye when harvested as 100; the average condition of oats when harvested as 95; the average condition of barley when harvested as 100; the average condition of buckwheat September 1 as 83; the average condition of potatoes as 73; the average condition of tobacco as 79; the average condition of apples as 49; the product of peaches compared with an average crop as 74; the average condition of grapes as 86; the number of hogs fattening compared with last year as 94; and the average condition of hogs as to weight and size as 100.

#### TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

[FROM THE UNITED STATES WEATHER-CROP BULLETINS]

*Week ending September 4.* — Week cool throughout the central valleys, lake regions and the northern States east of the Mississippi. The cool weather was attended by frosts in the upper lake region and the northern portion of Illinois. Warmer than usual from Minnesota westward to the Pacific coast. Week unusually dry throughout the central valleys, the upper lake region and westward to the Rocky Mountains. Generally throughout the central valleys the crops very much in need of rain. Rainfall generally in excess over the south Atlantic States and in the interior of the middle Atlantic and New England States. The severe hurricane of

last week passed over this region, attended with a great loss of life and property and damage to growing crops.

*Week ending September 11.* — Week unusually warm throughout the Ohio, upper Mississippi and Missouri valleys, western Texas and thence northward over the eastern Rocky Mountain districts. In the middle and south Atlantic States about the normal temperature conditions prevailed, while it was decidedly cooler than usual in New England and the central Gulf States. Weather unusually cool in the interior of central and northern California. Very heavy rains fell over the eastern Gulf States, in eastern Arkansas, central and western Tennessee, extreme southern Illinois and over portions of the Carolinas and Florida. More than the average amount of rain fell over portions of northern New England, western New York and on the Pacific coast northward to San Francisco. Over the remainder of the country no rain fell. Heavy rains caused damage to the cotton crop. Corn has been extensively cut in the western States, and tobacco cutting is progressing favorably in Pennsylvania, Maryland, Ohio and Kentucky.

*Week ending September 18.* — Week warmer than usual throughout the Mississippi, Missouri and Ohio valleys, lake region and south Atlantic States. Slightly cooler on the Atlantic coast from Virginia northward to Massachusetts, and slightly warmer than usual in the Carolinas and Georgia. More than the usual amount of rain fell in the Atlantic States from North Carolina northward, except in southern New England. Except in the north-western border States, but little rain fell during the week to the west of the Mississippi. In the Ohio valley and Atlantic coast States the rains have improved pastures, and put ground in good condition for fall ploughing. Cotton picking will be general during the coming week. The reports from this crop are generally unfavorable. Some slight injury was done by frost in exposed places in New England, and slight damage has also resulted to corn in Minnesota.

*Week ending September 25.* — Week warmer than usual throughout the Southern States, the Ohio valley and on the Atlantic coast south of New England. Colder than usual in all Pacific coast States, the central Rocky Mountain region

and from the upper lake region westward. Freezing temperatures occurred during the week, in the Dakotas, Montana, Wyoming, western Nebraska and northern Minnesota. More than the usual rainfall from southern New Mexico and northern Texas north-westward to the lake region. Along the gulf coast and in the States bordering on the Atlantic, except southern New Jersey, the rainfall was less than usual. Cotton picking has continued under favorable conditions. The week has generally been favorable for fall ploughing and seeding, and this work is being rapidly caught up and completed in some sections.

#### NEW ENGLAND WEATHER AND CROPS.

[FROM UNITED STATES WEATHER-CROP BULLETINS.]

*Week ending September 4.* — Temperature below normal, rainfall above in western and northern portions, but light elsewhere; the gale of the 29th ult. did an immense amount of damage to fruit and trees; frost of the 3d did some damage on low ground.

*Week ending September 11.* — Temperature below average; precipitation below average, except in southern New Hampshire; too cool for growing crops, corn especially; fruit prospects very poor.

*Week ending September 18.* — Precipitation above normal, except in eastern Maine; temperature normal; frosts have done damage in exposed places, but have not been general; corn and potatoes below average; pasturage good.

*Week ending September 25.* — Temperature below normal, except on Massachusetts coast; precipitation below average in all sections; sunshine normal; ground in fine condition for fall ploughing; more rain needed to fill springs before the ground freezes.

## MASSACHUSETTS WEATHER.

*Meteorological Data for September, 1893.*

[Furnished by the New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Clear.	Partly Cloudy.	Cloudy.
Adams, .	55.6	75	5	35	27	-	-	N.E.	-	-	-
Gt. Barrington	55.6	76	5	32	27	3.84	7	-	-	-	-
Springfield, .	59.1	79	5	38	27	2.53	8	-	-	-	-
Amherst, .	55.7	81	10	31	27	2.57	9	N.W.	11	10	9
Fitchburg, .	56.5	79	5	35	27	1.54	8	W.	-	-	-
Worcester, .	57.0	77	5	38	27	1.98	8	W.	9	9	12
Dudley, .	-	-	-	-	-	-	-	-	-	-	-
Framingham,	57.8	79	5	36	29	1.80	9	-	-	-	-
Concord, .	56.7	80	5	35	27	1.86	11	S.W.	11	7	12
Lowell, .	60.1	82	5	39	12	-	-	W., N.W.	10	12	8
Boston, .	60.0	80	5	43	30	1.59	12	W.	14	5	11
Taunton, .	58.2	79	14	38	12, 13	2.03	12	S.W.	-	-	-
New Bedford,	-	-	-	-	-	-	-	-	-	-	-
Hyannis, .	62.8	80	14, 20	47	11, 13	3.01	12	-	-	-	-
Provincetown, .	59.8	74	10	44	12	3.03	13	-	10	9	11

*Summary.*

*Temperature (F.).* — Monthly mean,  $58.1^{\circ}$ ; highest monthly mean,  $62.8^{\circ}$ , at Hyannis; lowest monthly mean,  $55.6^{\circ}$ , at Adams and Great Barrington; maximum,  $82^{\circ}$ , at Lowell on the 5th; minimum,  $31^{\circ}$ , at Amherst on the 27th; greatest local monthly range,  $50^{\circ}$ , at Amherst; least local monthly range,  $30^{\circ}$ , at Provincetown; greatest daily range,  $40^{\circ}$ , at Lowell on the 12th, Framingham on the 5th, Amherst on the 5th and 9th; least daily range,  $2^{\circ}$ , at Framingham on the 16th. Average temperature for September at Springfield for twenty-six years,  $62.8^{\circ}$ ; average for September, 1893,  $59.1^{\circ}$ ; departure,  $-3.7^{\circ}$ . Average temperature for September at Boston for twenty-three years,  $62.1^{\circ}$ ; average for September, 1893,  $60.0^{\circ}$ ; departure,  $-2.1^{\circ}$ .

*Precipitation.* — Average, 2.34 inches; greatest, 3.84, at

Great Barrington ; least, 1.54, at Fitchburg. Average for September at Springfield for forty-six years, 3.49 ; for September, 1893, 2.53 ; departure, — 0.96. Average for September at Boston for twenty-three years, 3.00 ; for September, 1893, 1.59 ; departure, — 1.41.

*Prevailing Wind Direction.* — Westerly.

*Thunder-storms.* — 7th, 16th, 25th.

*Aurora.* — Concord, 8th, 10th, 13th.

*Lunar Halo.* — 21st.

*Light Frost.* — Concord, Fitchburg, 3d.

*Killing Frost.* — Amherst, 27th, 28th, 29th.

### *Remarks.*

The weather conditions during the month of September, 1893, were influenced by seven cyclones and nine anti-cyclones. Five of the cyclones passed north of us down the St. Lawrence valley, one across central New England from west to east and one up the coast east of us.

The storms were not severe with possibly the exception of the thunder-storm of the 7th. A very heavy wind accompanied this storm, and considerable damage was done in the eastern part of the State and in the vicinity of Providence, R. I. At Boston the wind velocity increased in five minutes from sixteen to forty miles per hour, with a maximum velocity of forty-four miles.

The temperature during the month was considerably below the normal, and the precipitation was also deficient.

The storm of the 29th was accompanied by light snow in the Berkshire Hills. At Pittsfield the snow began at 7.40 A.M. and continued for about half an hour. The flakes were large and rain fell at the same time. The driver of the Williamstown and Pittsfield stage states that in the vicinity of New Ashford the snow was about three inches deep. Of course it melted in a very short time.

The last part of the month was unsettled, but no general storm occurred.

The crops are about all harvested, and are reported in good condition generally.

In the circular to correspondents returnable September 28 the following questions were asked : —

1. How does the crop of Indian corn compare with an average crop?
2. Are the rowen crop and fall feed up to the usual average?
3. Has the average amount of fall seeding been done, and what is its present condition?
4. Are fertilizers other than stable manure used in fall seeding, and if so, in what forms and amounts?
5. Is the onion crop an average, and if not, what were the drawbacks?
6. Are potatoes an average crop in yield and quality?
7. What is the prospect for root crops?
8. How have the apple and cranberry crops turned out?

Returns have been received from one hundred and eight correspondents, and from these the following summary has been made : —

#### CORN.

Indian corn was among the crops which were severely injured by the gales of the latter part of August, and has never recovered from the damage it then suffered. Of the one hundred and eight correspondents, only nineteen report the crop as good or average. Some call it nearly average, but a fair average of the returns from all over the State would probably not show over a three-fourths crop. In Worcester County and the four western counties the condition is particularly poor, there being very few reports of average crops. In the eastern portion of the State the crop approaches more nearly to the usual yield, but even here it is not nearly an average.

#### ROWEN AND FALL FEED.

Rowen suffered severely from the dry weather directly after haying, and is far from being an average crop. Many correspondents report it as almost an entire failure, while many others call it either very light or less than half a crop.



A few speak of it as average, but on the whole the crop may be considered as ranging from light to very light.

The rains, which came too late to save the rowen crop, have materially helped fall feed, and it may now be called fair, though it can hardly be said to be in average condition. Improvement is particularly noticeable in Worcester County and the four western counties, where the condition, though not up to the average, is much better than that reported for pasturage a month ago.

#### FALL SEEDING.

Fully the average amount of fall seeding has been done, what local changes there were having been fully balanced by opposite changes in other localities. The present condition is generally good, though some refer to it as poor or only fair. There is some complaint of its being late and slow in starting, particularly in Worcester County, but even then it usually promises well.

Stable manure seems to be the main reliance in fall seeding, though another practice not uncommon is to seed after some crop which has been well manured without extra fertilizer. Where other fertilizers are used, ashes and bone in some form or other seem to be in about equal use. Next come muriate of potash and the other forms and combinations of potash which are generally upon the market. Special fertilizers for grass are somewhat used, though not generally so. Very little data was secured as to the amounts used, certainly not enough to warrant a general statement.

#### ONIONS.

Onions are hardly an average crop, for, though fully half the correspondents report the crop to be either good or average, the remainder speak of it as either less than average or light. The midsummer drought seems to be the principal drawback, though there are many complaints of maggots, and a few of too wet weather in the spring and failure to germinate. Some also state that the crop is ripening slowly and producing many thick necks.

## POTATOES.

Potatoes are generally reported to be below an average crop, and this condition extends about uniformly over the State, with the exception of Barnstable County, where more than an average crop is reported. In other sections the reporting of an average yield is rare, and many speak of them as only a one-half or three-fourths crop. On the other hand, the quality is generally reported good, though a number call it only fair or average. Only five complaints of rot have been received.

## ROOT CROPS.

Root crops generally promise well, reports of poor crops being exceptional. Most correspondents speak of the prospect as either good or excellent, and the greater portion of the remainder consider it as fair.

## APPLES AND CRANBERRIES.

The apple crop is very light in all sections, and in many localities is a total failure. The drop of the early part of the season reduced the crop materially, and much of the little fruit remaining was blown from the trees by the severe gales of the latter part of August. Fall apples are reported as somewhat more plentiful than winter fruit, but even they do not approach nearly to the usual average.

In the section of commercial production, viz., the southeastern portion of the State, cranberries are fully an average crop and probably a little above average. The correspondent for Barnstable refers to the crop as the largest ever harvested. In other sections they are on the whole rather below the average, but this will probably not affect the general supply to any great extent.

## NOTES OF CORRESPONDENTS.

(Returned to us September 28.)

## BERKSHIRE COUNTY.

*Egremont* (J. H. ROWLEY). — Corn is an average crop, though not up to last year. Rowen and fall feed are not up to the usual average. The average amount of fall seeding has been done, and, though drought retarded the growth somewhat, late rains have improved it so that it is now in good condition. Commercial fertilizers are used in fall seeding, at the rate of from two to three hundred pounds per acre. Potatoes are average in quantity but not in quality. The apple crop is almost a complete failure.

*Lee* (A. BRADLEY). — Corn is a full average crop. Rowen and fall feed are about eighty-five per cent of the usual average. Late potatoes are a light yield, of very small size; early potatoes average. The apple crop is good in some sections and very light in others.

*Richmond* (O. F. SMITH). — Corn is about a three-fourths crop. Rowen and fall feed are not quite up to the usual average. The average amount of fall seeding has been done, and is in fair condition. Onions are an average crop. Potatoes are below average in quantity but of fine quality. The prospect for root crops is good. The apple crop is almost a total failure.

*Hancock* (C. H. WELLS). — Corn will compare favorably with an average crop. Rowen and fall feed are not up to the average. Very little fall seeding has been done, and no fertilizers of any amount beside stable manure are used. Onions will be a light crop, owing to dry weather and maggots. Potatoes are an average crop in quantity and quality. The prospect for root crops is good. Apples are a light crop.

*Cheshire* (L. J. NORTHUP). — Corn is twenty per cent less than an average crop. There is but little rowen or fall feed. The average amount of fall seeding has been done, but it seems a little backward. Fertilizers are used to some extent in fall seeding. Potatoes are a full average crop, of good quality without rot. Root crops are looking their best. Apples will be a fair crop in sheltered localities.

## FRANKLIN COUNTY.

*Charlemont* (H. S. GILES). — Corn is not up to an average crop, as the weather has not been favorable for maturing in. Rowen and fall feed are below the average. The average amount of fall seeding has been done, but the present condition is not as good as some years. Ashes are somewhat used in fall seeding. Onions are not an average crop, because of dry weather. Potatoes are not average in quantity, but are of excellent quality. Root crops promise favorably. Apples are the lightest crop for years.

*Whately* (FRANK DICKINSON). — Corn is about three-fourths of a full crop. Rowen and fall feed are below average, on account of the dry weather. The average amount of fall seeding has been done, and is in good condition. Onions are not an average crop; drawbacks a cold, wet spring and dry summer. Potatoes are below the average in yield, but of good quality. The prospect for root crops is good. Apples are a total failure.

*Leverett* (W. L. BOUTWELL). — Corn is ninety per cent of a full crop. There is very little rowen, and fall feed is below the average. The average amount of fall seeding has been done, and it is well started. It is customary to seed after some crop that has been well manured. Dry weather somewhat lessened the onion crop. Potatoes are an average crop in yield and quality. Root crops promise well. Both apples and cranberries are very poor crops.

*Northfield* (CHAS. POMEROY). — Corn is about ninety per cent of a full crop. Rowen is about half a crop, but pastures are fully up to the average. Fully the average amount of fall seeding has been done, and the condition is fair. Ashes are somewhat used in fall seeding. The onion crop is below the average, because of dry weather. Potatoes are a three-fourths crop of fair quality. Root crops promise to be average. There will be very few winter apples.

*Orange* (ANSEL HARRINGTON). — Corn is about three-fourths of an average crop. About one-half the usual amount of rowen will be cut, and fall feed is short. Fully the average amount of fall seeding has been done, and the present condition is very good. Onions are below an average crop, on account of the drought. Potatoes are about two-thirds of an average crop, quality very good. Root crops promise poorly. Apples are not over a one-fifth crop.

## HAMPSHIRE COUNTY.

*Belchertown* (H. C. WEST). — Corn is about a three-fourths crop. There is little or no rowen, and fall feed is below the average. About the average amount of fall seeding has been done, but it is

not in good condition, and much will have to be reseeded. Very little commercial fertilizer is used for fall seeding. Potatoes are very nearly up to an average yield, and are of full average quality. Root crops are very good, except English turnips. Apples are half a crop.

*Amherst* (WM. P. BROOKS). — Corn is generally much below an average crop, on account of drought. Rowen is hardly half a crop, and almost nothing on old fields. The average amount of fall seeding has been done, and is in fair condition. Special fertilizers for seeding down are used to a small extent. Onions are about an average crop, but rather green. Potatoes are generally below average in yield, but are all sound and of good quality. Turnips and carrots promise fairly, but beets are small, on account of drought. Apples are fairly abundant and good. Tobacco is curing well.

*South Hadley* (H. W. GAYLORD). — Corn has eared light, and will not be more than half a crop. There is no rowen to speak of, and fall feed is about the same. Rather more than the average amount of fall seeding has been done, and looks fairly well. Fully one-half the seeding is done with commercial fertilizers, from six hundred to eight hundred pounds per acre. Potatoes are about a three-fourths crop. Root crops will not be more than three-fourths of an average. Apples are not more than forty per cent of an average crop.

*Northampton* (D. A. HORTON). — Corn will not be over a two-thirds crop. There is very little rowen, but fall feed is good. The average amount of fall seeding has not been done, and early seeding was a poor catch. Ashes, bone and muriate of potash are used in fall seeding. Onions are small, because of the drought, but the increased acreage more than makes up for this. Potatoes are a full average crop. Root crops are very good, except English turnips. Apples were so badly blown off by winds that the crop will be light.

*Southampton* (C. B. LYMAN). — Corn is about eighty-five per cent of an average crop. The rowen crop is very light, but fall feed is nearly up. The average amount of fall seeding has been done, and the present condition is good. Seeding is mostly done after corn or tobacco without extra fertilizer. Onions are uneven, some pieces being extra and others failures. Potatoes are not up in quantity, but are of good quality. Root crops look well. Apples are a light crop.

#### HAMPDEN COUNTY.

*Blandford* (E. W. BOISE). — Corn will be about ninety per cent of an average crop. Rowen is not up to the usual average, and

fall feed is very short, though the late rains have started it well. The usual amount of fall seeding has been done, and is looking extra well. Fertilizers other than stable manure are not used in fall seeding. Potatoes are an average yield, as a general thing. The prospect for root crops is good. Apples are a very short crop, on account of the number blown from the trees.

*Westfield* (C. F. FOWLER). — Corn is about a three-fourths crop. About the average amount of fall seeding has been done, but some is late, on account of dry weather. Grass fertilizers are used to a limited extent in fall seeding. Potatoes are short in yield, but of good quality. Apples are half a crop or less.

*Holyoke* (JOHN C. THORPE). — Corn is about sixty per cent of an average crop. Rowen is a failure, but fall feed has improved since the late rains. The average amount of fall seeding has been done, and is looking well. Onions are about an average crop. Potatoes are about half a crop, of good quality. Root crops are looking well. Apples are about one-fifth of a crop.

*Chicopee* (R. W. BEMIS). — Corn is an average crop, and the acreage is larger than common. Rowen and fall feed are not up to the average. The average amount of fall seeding has not been done, and it is too dry to look very well. The onion crop is hardly average, on account of dry weather. Potatoes are hardly an average crop. Root crops promise very well. There is quite a good crop of apples.

*Brimfield* (S. W. BROWN). — Corn is not over one-half a crop. Rowen is not more than one-third a crop. The average amount of fall seeding has been done, but does not look well, as it is too dry. Fertilizers other than stable manure are not used in fall seeding. Potatoes are not over two-thirds of a crop. Root crops are looking poorly. Apples are not over one-fourth of a crop.

#### WORCESTER COUNTY.

*Southbridge* (G. L. CLEMENCE). — Corn is about twenty-five per cent below an average crop. There is little either of rowen or fall feed. The average amount of fall seeding has not been done, but that sown is looking well. Onions are about an average crop. Potatoes are an average crop in yield and quality. The apple crop is small, and nearly ruined by heavy gales.

*North Brookfield* (JOHN H. LANE). — Corn is about sixty per cent of an average crop. Rowen and fall feed are each about a one-fourth crop. Potatoes are about a two-thirds crop, with the late-planted the best. Swedish turnips are first class. Apples were badly blown off, and cranberries are nearly a failure. Corn and potatoes have stood the drought better than most crops.

*Hardwick* (WM. A. WARNER). — Corn is very nearly an average crop. Rowen is not one-tenth of a crop. The average amount of fall seeding has been done, and is looking well; little fall seeding in this locality. Potatoes are not an average in yield, but are of good quality. Root crops are below an average. Apples are not one-half a crop.

*Winchendon* (W. H. SAWYER). — Rowen and fall feed are both below the average. The average amount of fall seeding has been done, but was delayed until late, because of the drought. Scarcely any fertilizers other than stable manure are used for fall seeding. Potatoes are about three-fourths of a crop, of good quality. Root crops promise fairly well. There are no apples at all.

*Fitchburg* (DR. JABEZ FISHER). — Rowen is a very small crop, but fall feed is good. Very little fertilizer other than stable manure is used for fall seeding. Potatoes are a fair crop, of very fine quality. Apples generally are virtually no crop, though my own will be a one-fourth crop of extra quality.

*Bolton* (H. F. HAYNES). — Corn is about a three-fourths crop, though there are good crops on low land. Rowen and fall feed are neither of them nearly an average. The average amount of fall seeding has been done, but it is uneven. Ashes, raw bone and sulphate of potash are used in fall seeding. Potatoes are not half a crop, but the quality is good. Root crops are late, but are doing well now. There are no apples.

*Worcester* (H. R. KINNEY). — Early pieces of corn are very good, but the later are very poor, because of drought and winds. Rowen is poor, but fall feed is good now. There has been but little seeding done, and that not very early, on account of the drought. Onions are not an average crop, because of wet weather early in the season and dry weather later. Potatoes are much below the average in yield, but of good quality. Root crops are doing well now, but grasshoppers ruined most of the turnips. There are no apples to speak of.

*Oxford* (D. M. HOWE). — Corn was so badly blown down that it falls below the average. Rowen and fall feed are not up to the average. The average amount of fall seeding has been done, and it is looking well. No fertilizers other than stable manure are used in fall seeding. Potatoes are far above an average crop, and free from rot. The prospect for root crops is good. Apples are nearly all blown off, and cranberries will be scarce here.

*Blackstone* (L. R. DANIELS). — Corn is about ninety per cent of an average crop. Rowen is sixty per cent of an average crop, and fall feed about eighty per cent. The average amount of fall seeding has been done, and it is in good condition. Commercial fer-

tilizers are used in fall seeding, being sown broadcast about three-fourths of a ton to the acre. Onions are a satisfactory crop. Potatoes are an average crop, of extra quality. Root crops are in fair condition, though some fields have suffered from the drought. The cranberry crop is generally better than usual. Celery and tomatoes have grown finely, and been very productive the past season. Among forage crops barley is growing in favor.

#### MIDDLESEX COUNTY.

*Sherborn* (N. B. DOUGLAS). — The corn crop will be from twenty-five to forty per cent short. Rowen and fall feed are up to the usual average. The average amount of fall seeding has not been done, and the condition is only medium. Very little if any fertilizer other than stable manure is used in fall seeding. Potatoes are a very small yield, of average quality. The prospect for root crops is good. The apple crop is very light, and cranberries have been injured by frost.

*Marlborough* (E. D. HOWE). — Corn will be ninety per cent of an average crop. Rowen is less than half a crop, and fall feed is not over three-quarters. About the usual amount of fall seeding is being done. Fertilizers other than stable manure are not used to any great extent in fall seeding. A few seed-down in the corn fields in August. The onion crop is not average, owing to wet weather at time of sowing. Potatoes are not average in quantity, but are fully up in quality. Apples will be a one-fourth crop of poor quality.

*Concord* (WM. H. HUNT). — The corn crop is about fifteen per cent short. Rowen and fall feed are below the average. A little less than the average amount of fall seeding has been done, the present condition being fair. Bone, ashes, superphosphates, lime and muriate of potash are used in fall seeding, at the rate of from five hundred to one thousand pounds per acre. Onions have not done well. Potatoes are about a two-thirds crop, of good quality but with some rot. The prospect for root crops is fair. Winter apples will be a one-fourth crop and fall apples a three-fourths crop. There is a good crop of grapes, but they are not ripening well, and the price is low. Squashes are a short crop, not having set well.

*Groton* (DANIEL NEEDHAM). — Corn compares fairly well with an average crop. Rowen and fall feed are not up to the usual average. The average amount of fall seeding has been done, and it is now in good condition. Commercial fertilizers are used in fall seeding, at the rate of from four hundred to five hundred



pounds per acre. Potatoes are about half a crop. Root crops promise well. Apples and cranberries are a small yield. The season has been remarkable for persistent dryness and low temperature.

*Billerica* (J. N. PARDEE). — Corn is considerably below an average crop. On many fields rowen is not worth cutting, but fall feed is reasonably good. The average amount of fall seeding has been done, and its present condition is favorable. Fertilizers other than stable manure are not used in fall seeding. Potatoes are of excellent quality, but much below the average in quantity. There are a few fall apples, but winter apples are a general failure. Corn and cabbage were badly damaged by the severe winds loosening the roots.

*Winchester* (MARSHALL SYMMES). — Rowen and fall feed are up to the usual average. Potatoes are an average crop in yield and quality. The prospect for root crops is good. Apples are scarce, a great many having been blown off by the high winds. Cauliflowers are very late, and the bulk of the crop will not come till the last weeks in October.

#### ESSEX COUNTY.

*Haverhill* (EBEN WEBSTER). — Corn is not quite up to an average crop. Rowen and fall feed are not quite up to the average. About the usual amount of fall seeding has been done, and it is looking well. Stable manure is about all that is used in fall seeding. Onions are not quite an average crop, they seem to stop growing and the tops dry too soon. Potatoes are irregular in yield and quality, some fields being good and some poor. Root crops promise well. There are no apples except early ones.

*West Newbury* (JOHN C. TARLETON). — Corn is about an average crop. Rowen is a very good crop. About the usual amount of fall seeding has been done, and it is looking well. Fertilizers other than stable manure are not used to any amount in fall seeding. Some fields of onions are very good, while others are full of thick necks. Potatoes are an average crop, and there is little complaint of rot. The prospect for root crops is good. There are no apples of any account.

*Ipswich* (O. C. SMITH). — Corn is almost an average crop. Rowen is little more than half a crop, but fall feed is now up to the average in condition. The average amount of fall seeding has been done, and the condition will average eighty per cent, though some fields have been ruined by grasshoppers. Bone dust and ashes are mostly used in fall seeding. The onion crop is about

an average. Potatoes are about half a crop, with quality not extra and some rot. Root crops are average in yield and quality. Apples are a very small crop, and cranberries an average one.

*Topsfield* (B. P. PIKE). — Corn is about eighty-five per cent of an average crop. Rowen and fall feed are not up to the usual average. The average amount of fall seeding has not been done, and the condition is only fair. Ashes are used somewhat in fall seeding. Onions are not ripening well. Potatoes are not an average crop in yield or quality. There is a very light crop of both apples and cranberries.

*Marblehead* (WM. S. PHILLIPS, Jr.). — Rowen is not quite an average crop, but fall feed is fully up to the average. More land has been put to grass this fall than usual, and the condition at present is very good. Stable manure is almost exclusively used in fall seeding. The onion crop is up to the average in quantity but not in quality, many fields not having yet died down. Potatoes are not an average crop, and some fields are rotting badly. The prospect for root crops is excellent. There are no apples to speak of.

#### NORFOLK COUNTY.

*Medway* (MONROE MORSE). — Sweet corn is about four-fifths of an average crop. The rowen crop and fall feed are not up to the usual average. Many use from six hundred to one thousand pounds per acre of some slow-acting fertilizer in seeding down. Potatoes are of good quality but small, and about three-fourths of an average crop. Apples were largely blown from the trees.

*Millis* (E. F. RICHARDSON). — Corn is a good crop. Fall feed is in average condition, but rowen is not up to the average. More than the average amount of fall seeding has been done, and it is in good condition. Fertilizers other than stable manure are not used in fall seeding. Potatoes are an average crop in yield and quality. The prospect for root crops is good. Apples and cranberries are poor crops.

*Medfield* (GEO. R. CHASE). — Corn is a first-class crop. Rowen and fall feed are less than fifty per cent in yield and condition. More than the average amount of fall seeding has been done, and it is now in good condition. Commercial fertilizers are coming more and more into use in fall seeding. Potatoes are below the average in yield, but of good quality. Root crops promise to be average in yield. The apple crop is almost a complete failure, and the cranberry crop light.

*Franklin* (C. M. ALLEN). — Corn is about three-fourths of an average crop. Rowen and fall feed are not up to the usual aver-

age. About nine-tenths of the usual amount of fall seeding has been done, and it is looking well. Very little fertilizer other than stable manure is used in fall seeding. Potatoes are not over three-fourths of a full crop. Root crops will be light, with the exception of turnips. Apples are a light crop.

#### BRISTOL COUNTY.

*Attleborough* (ISAAC ALGER). — Corn is a full average crop. Rowen and fall feed are up to the usual average. The average amount of fall seeding has been done, and is in good condition. No fertilizers other than stable manure are used in fall seeding to any extent. Potatoes are not an average in quantity, but are fully up in quality. Root crops promise well. There are no apples, and cranberries are about one-third of a crop.

*Taunton* (C. H. WILMARTH). — Corn is below an average crop, on account of dry weather. Rowen and fall feed are not up to the average. The average amount of fall seeding has been done, and is in fair condition. The onion crop is below the average, they being small, because of dry weather. Potatoes are below the average in yield and quality. The prospect for root crops is good. Apples and cranberries are about average crops.

*Dighton* (A. W. PAUL). — Corn is about an average crop, although badly blown down. Rowen is not up to the average, but fall feed is at present fully up. The average amount of fall seeding has been done, and is in good condition. Fine bone is used in fall seeding, about a ton to the acre. Onions are not an average crop, on account of failure of seed and attacks by maggots. Potatoes are of good quality, but the yield is less than an average. The prospect for turnips is very good. Cranberries are a fair crop, but apples are scarce and poor. Tomatoes are late in ripening, and beans have blasted. Pears are a good crop, but of poor quality.

*Swansey* (F. G. ARNOLD). — Corn is below the average, having been much damaged by the gales and having much smut. Rowen and fall feed are fully up to the average. The usual amount of seeding has been done, and its condition is good. Ashes, ground bone and potash are used in fall seeding. Potatoes were a little below the average. Beets are good, but late turnips will be light. Apples were nearly all blown off, but the cranberry crop is good.

*Dartmouth* (L. T. DAVIS). — Corn is about ninety per cent of an average crop. Rowen is not so good as some years, but fall feed is very good. Fall seeding has been quite extensive, and is looking very good. Bone and ashes and other forms of potash

are used in fall seeding. The onion crop is a fair average. Potatoes are about a three-fourths crop, of good quality. Root crops promise very well. Apples are nearly a failure.

#### PLYMOUTH COUNTY.

*Brockton* (DAVIS COPELAND). — Corn was badly damaged by the wind, and will not be over a four-fifths crop. Rowen and fall feed are up to the usual average. The average amount of fall seeding has been done, and is in good condition. The onion crop is an average one. Apples are a poor crop, and cranberries a good one.

*Marshfield* (G. J. PETERSON). — Corn has suffered from the severe gales, and is below the average. The rowen crop is an average one. Fall seeding is looking finely, and the average amount has been done. Potash, bone and occasionally nitrate of soda are used in fall seeding. Onions have done well. Potatoes are above the average in this locality. Root crops have done very well. The apple crop is light, but cranberries are above the average. Celery is backward, but cabbages are looking finely.

*Hulifax* (G. W. HAYWARD). — Corn will be about an average crop, if it ripens well. Rowen and fall feed are better than usual. More fall seeding has been done than usual, and it is looking well. Bone and wood ashes in connection with stable manure are used considerably in seeding down. Onions are an average crop. Potatoes are not a full crop, but the quality is good, though some are rotting. The prospect for root crops is fair. Apples are a very poor crop, and cranberries an abundant one.

*Lakeville* (ELBRIDGE CUSHMAN). — Corn is fully an average crop. Rowen is an exceptionally good crop, and fall feed is much above the average. The average amount of fall seeding has been done, and is in very good condition. Fine-ground bone and muriate of potash are used in fall seeding. Onions are an average crop. Potatoes are a three-fourths crop, of good quality except on low ground, where they have rotted badly. Turnips are a good crop. Apples are an entire failure, but cranberries are abundant.

*Wareham* (A. SAVARY). — Corn is a three-fourths crop. Rowen is good on low land, and fall feed fair. Less than the usual amount of fall seeding has been done, but its condition is good. Fertilizers other than stable manure are not used to any extent in fall seeding. Potatoes are below an average in yield, but of good quality. Root crops do not promise very well. There are no apples, but cranberries are abundant and of good quality.

## BARNSTABLE COUNTY.

*Fulmouth* (D. R. WICKS). — Corn is fully up to the average. Rowen is not average, but fall feed is very good. Fall seeding is completed, and looks promising. Very little commercial fertilizer is used here in seeding down. The onion crop is up to the average. Potatoes are a good crop, of very fine quality. Root crops are looking finely. The apple crop is a failure, and cranberries are not yet harvested.

*Sandwich* (J. R. HOLWAY). — Corn is a little over half a crop. The rowen crop and fall feed are up to the usual average. The average amount of fall seeding has been done, and is in good condition. Ashes and ground bone are used in fall seeding. Potatoes are rather more than an average crop. There is an average crop of both apples and cranberries. The cranberries are very small, but all the bogs yield fair crops.

*Barnstable* (JOHN BURSLEY). — Corn will not be over a three-fourths crop. Rowen and fall feed are less than the usual average. An average amount of seeding has been done, but most of it is very late. Commercial fertilizers are used in limited quantities in fall seeding. Potatoes are a full average crop. French turnips promise well. Apples are a very small crop, but there is probably the largest crop of cranberries ever harvested.

*Dennis* (JOSHUA CROWELL). — Corn is not over a three-fourths crop. The rowen crop and fall feed are not up to the usual average. Not much fall seeding is done here, as spring seeding has given better results. The onion crop is a little below the average. Potatoes are an average crop in yield and quality. Root crops promise fairly well. Apples are a very light and cranberries a full crop.

*Brewster* (J. H. CLARK). — Corn is not quite an average crop. Rowen and fall feed are well up to the usual average. The usual amount of fall seeding has been done, and is in very good condition. Fertilizers other than stable manure are not used to any extent in seeding down. Onions are a good crop. Potatoes are an average crop in yield and quality. The prospect for root crops is very good. Apples are a very light crop. The cranberry crop is good, but prices are low.

## DUKES COUNTY.

*West Tisbury* (WM. J. ROTCH). — Corn is just about an average crop. Rowen is an entire failure, and fall feed is below the average. Very little fall seeding has been done, and no commercial

fertilizers of any consequence have been used here this fall. Onions are a light crop, owing to dry weather. Potatoes are scarcely an average crop, having been injured by drought. Root crops promise well. The apple crop is light and the cranberry crop heavy.

#### NANTUCKET COUNTY.

*Nantucket* (CHAS. W., GARDNER). — Corn was badly damaged by the high winds, and will not be over a two-thirds crop. Rowen and fall feed are below the average, owing to dry weather. As a general thing, there is no fall seeding done here. Onions are not an average crop, because of ravages by maggots. Potatoes are about half a crop. The prospect for turnips and mangolds is very good.

SERIES OF 1893.

BULLETIN No. 6.

MASSACHUSETTS  
CROP REPORT

FOR THE

MONTH OF OCTOBER, 1893.

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ISSUED BY

WM. R. SESSIONS,  
SECRETARY STATE BOARD OF AGRICULTURE.

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BOSTON :  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
18 POST OFFICE SQUARE.  
1893.





## CROP REPORT FOR THE MONTH OF OCTOBER, 1893.

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OFFICE STATE BOARD OF AGRICULTURE,  
BOSTON, MASS., Nov. 1, 1893.

This issue of the Crop Report, Bulletin No. 6, will be the last for the present year. It is hoped, and indeed expected, that the work will be continued another season along much the same lines as heretofore. To our correspondents we wish to express our sincere thanks for the returns they have sent us and the well sustained interest in the work which they have generally manifested. We look forward to next season with the belief that we shall then receive equally cheerful and active assistance.

With this number the sixth season of the issue of monthly crop reports is completed. The bulletins of the present year have been mainly occupied with the notes of correspondents, our deductions from the same, statistics and remarks concerning the weather, and synopses of the monthly reports of the Statistician of the U. S. Department of Agriculture. Lack of funds has compelled us to omit the short articles treating of special subjects which have been among the features of former years. If with another season funds are available these will, in all probability, be resumed.

### PROGRESS OF THE SEASON.

In Report No. 109 (October, 1893) the Statistician of the United States Department of Agriculture gives the October condition of corn as 75.1, against 76.7 for last month and 79.8 for October, 1892. This falling off in condition is due to the drought, which continued from June to the latter part of September and was most severe in the principal corn-producing States. The average condition has fallen every month since the July report, when it stood at 93.2. Frost has caused but little damage and that only in the Northern and Western States. The rate of yield varies greatly owing to the varying condition of the soil in different localities, when the corn was planted, and when the drought struck it.

For wheat a yield of about 11.3 bushels is indicated,

which is 1.7 bushels less than last October's estimate. The highest rate of yield is in the New England, Eastern, extreme Western, and Mountain States, and lowest in the Central, Western and Southern States. Drought in the fall and again in the spring, together with the severe winter, operated to bring about this poor condition.

The yield of oats is expected to be about 641,000,000 bushels against 661,000,000 bushels last year, or a yield per acre of 23.5 bushels against 24.3 last year. This falling off was largely due to the dry weather.

The average estimated yield of rye per acre is 13.3 against 12.7 in October, 1892, the September report making the condition when harvested 82. For barley a yield of 21.7 bushels per acre is indicated, against 23.7 last October. The last report of the condition of buckwheat is 73.5, against 77.5 for last month, and 85.6 in October, 1892.

Cotton has declined 2.7 points during the past month and the condition is now 70.7. The decline in condition has been steady and persistent during the season. The weather conditions and the various insect enemies of the plant have contributed to the resulting condition. Weather conditions are favorable to successful picking in most parts.

The average condition of potatoes is given as 71.2, a fall of 0.6 of a point only since the last report. The general rains of the month caused a cessation of the rapid decline in condition. In only three years in the last decade has the October condition been lower, viz., 1887, 1890 and 1892.

The weather during September was generally favorable in the tobacco growing districts, but was generally too late to repair the damage wrought during the early part of the season. The present condition is 74, which is the lowest October condition since 1887, when it stood at 73.8. Many localities report damage by severe wind storms and some others by hail.

In Massachusetts the average yield per acre of rye is given as 16.2 bushels, the average yield of oats as 34.8 bushels, the average yield of barley as 30 bushels, the average condition of buckwheat October 1 as 82, the average condition of corn as 87, the average condition of potatoes as 81, and the average condition of tobacco as 86.

## TEMPERATURE AND RAINFALL FOR THE WHOLE COUNTRY.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending October 2.\** — Cooler than usual in all sections with the exception of the cotton region and the lower Mississippi and Missouri valleys. From the lower Lake region and southern New England southward to the Carolinas, and from the upper Lake region westward to the Rocky Mountain and plateau regions, the daily temperatures were considerably below the normal. Frosts were quite general over the greater part of the northern portions of the country. Decidedly less rain than usual fell from the upper Ohio valley and Lake region eastward to the Atlantic coast and from eastern Texas to the south Atlantic coast. Over the western portion of the Carolinas, southern Virginia, the lower Ohio valley, and generally westward of the Mississippi the rainfall was excessive, the abundant rains being greatly needed in the Western and Northwestern States. The Middle Atlantic States have had favorable weather for harvesting, while the weather in the cotton region has been generally favorable for picking. The abundant rains in the Central and Western States have put the ground in good condition for plowing and will greatly improve pasturage.

## NEW ENGLAND WEATHER AND CROPS.

FROM UNITED STATES WEATHER-CROP BULLETINS.

*Week ending October 2.\** — Temperature below normal; rainfall below normal in north; weather unfavorable for late harvest; crops mostly gathered, generally good except potatoes and fruits.

## MASSACHUSETTS WEATHER.

January, 1893, was a remarkably cold month, the average deficiency in temperature being 6°. The highest temperature was 60°, at Fall River, on the 29th, and the lowest —23°, at Middleborough, on the 17th. The only colder months during the past twenty years have been January, 1875, January, 1881, February, 1885, and January, 1888.

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\* Discontinued with this issue.

The precipitation was about one inch below the normal. The prevailing wind direction was northwest, and the greatest velocity, 88 miles an hour from the southeast, was at Blue Hill, on the 2d.

February was below the normal in temperature, the average deficiency being slightly more than a degree. The highest temperature was  $57^{\circ}$  at Lake Cochituate, on the 15th; the lowest  $-11^{\circ}$  at Ludlow, on the 21st. Precipitation was heavy and much above normal. The snowfall was remarkably heavy, being 6 feet 6 inches at Monroe. The prevailing winds were from the northwest, the highest velocity being 72 miles per hour.

The temperature departure for March was  $-1.5^{\circ}$ . The highest temperature was  $64^{\circ}$  at Plymouth on the 24th, and the lowest  $-6^{\circ}$  at Lake Cochituate on the 3d and at Monroe on the 9th. Precipitation and snowfall were both below normal. Prevailing winds were from the northwest, and the greatest velocity was 61 miles per hour from the northwest, at Blue Hill on the 16th.

In April the average departure was  $-1.5^{\circ}$ . At Blue Hill it was the coldest April since 1888. The precipitation averaged about normal, but was unevenly distributed; the departure at Amherst being  $+1.32^{\circ}$ , and at Cambridge  $-0.93^{\circ}$ . Snow fell on the 7th and 8th to an average depth of 6 inches, but remained on the ground scarcely twenty-four hours. Twenty-one inches was reported at Monroe. The prevailing winds were from the northwest, and the maximum velocity was 61 miles per hour from the west, at Blue Hill on the 5th.

The temperature for the month of May averaged very nearly normal in eastern Massachusetts, and slightly below in western sections. Light frosts were reported on the 7th, 8th and 9th, but no damage was done. The precipitation was above normal and heavy in most sections, the average departure being  $+1.31$  inches. At most stations more than half the rain of the month fell in the first six days. Considerable damage was done by the rain of the 3d and 4th. No severe thunderstorms occurred. Prevailing wind direction southwest and west.

The mean temperature for June was slightly below the

normal, and the precipitation, except on Cape Cod, was also deficient. The latter part of the month was unusually cool, owing to easterly winds. The rainfall averaged 3.20 inches, or about an inch below the normal. Several light thunderstorms occurred. No high gales were noted, although the wind movement was greater than usual. The percentage of relative humidity was considerably above the average for June.

In July the temperature varied but slightly from the normal, but the precipitation was decidedly deficient. Showers were frequent, but little damage was done, and the rainfall was light and unevenly distributed. On the 25th the minimum temperature ranged from  $40^{\circ}$  to  $54^{\circ}$ , and a light frost occurred at Taunton. Sunshine was considerably more than average, only five cloudy days being recorded at Boston. No violent windstorms were reported, although some damage was done in various parts of the State during several thunderstorms. The prevailing wind direction was west. Hail occurred at Worcester on the 5th.

August will long be remembered as a month of numerous storms of unusual severity. Thunderstorms were severe, but not frequent. The storm of the 6th was almost a tornado at Taunton, accompanied by severe hail, and at Lynn the damage by lightning and flood was estimated at \$75,000. Severe storms occurred on the 20th and 24th, the maximum wind velocity reaching 46 miles in the latter storm. The storm of the 29th was probably the worst August storm for years. Although the loss of life and property in this section did not approach that in the Southern States, many thousand dollars' worth of damage was done in New England and the northeast. The rainfall was moderate, but the wind was very severe, the extreme velocity being 75 miles at Boston at 4.12 P.M.

The temperature for the month showed an excess of from  $1.1^{\circ}$  to  $1.7^{\circ}$ . Precipitation was considerably above normal in the eastern portions of the State and nearly as much below in the western. The prevailing wind direction was southwest. Light frosts occurred at Great Barrington on the 14th and at Adams on the 23d and 31st. Hail fell at Fitchburg and Concord on the 7th.

The month of September had a temperature considerably below the normal and the precipitation was also deficient. There were seven cyclones and nine anti-cyclones. The storms were not severe with the possible exception of the thunderstorm of the 7th. The storm of the 29th was accompanied by light snow in the Berkshire Hills. Rain fell at the same time and the snow melted in a very short time. The last part of the month was unsettled, but no general storms occurred. The prevailing wind direction was westerly. There were light frosts at Concord and Fitchburg on the 3d, and killing frosts at Amherst on the 27th, 28th and 29th.

*Meteorological Data for October, 1893.*

[Furnished by the New England Weather Service.]

STATION.	TEMPERATURE. DEG. F.					PRECIPITATION.		Prevailing Wind.	CLOUDINESS. NO. OF DAYS.		
	Mean.	Maximum.	Date.	Minimum.	Date.	Total in Inches.	Days with Precipitation.		Clear.	Partly Cloudy.	Cloudy.
Adams, .	-	-	-	-	-	-	-	-	-	-	-
Gt. Barrington .	-	-	-	-	-	-	-	-	-	-	-
Springfield, .	53.6	78	9	26	31	5.16	6	-	-	-	-
Amherst, .	51.8	79	9	22	31	4.45	6	S.W.	18	7	6
Fitchburg, .	52.3	76	9, 12	27	30, 31	4.92	7	-	-	-	-
Worcester, .	52.5	75	9	26	31	3.68	6	W.	9	13	9
Dudley, .	54.1	76	13, 22	26	31	3.93	7	W.	12	10	9
Framingham. .	52.8	77	9	24	31	4.08	8	-	-	-	-
Concord, .	52.6	80	9	25	17	4.35	6	S.W.	14	10	7
Lowell, .	52.7	80	9	25	31	-	-	-	-	-	-
Boston, .	54.8	79	9	30	31	2.94	5	S.W.	16	10	5
Taunton, .	53.7	80	9	25	30	3.33	3	N.W.	11	13	7
New Bedford, .	53.0	72	8	27	31	2.61	6	S.W.	19	7	5
Hyannis, .	-	-	-	-	-	-	-	-	-	-	-
Provincet'n, .	-	-	-	-	-	-	-	-	-	-	-

*Summary.*

*Temperature* (F.). — Monthly mean,  $53.1^{\circ}$ ; highest monthly mean,  $54.8^{\circ}$  at Boston; lowest monthly mean,  $51.8^{\circ}$  at Amherst; maximum,  $80^{\circ}$  at Concord, Lowell and Taunton on the 9th; minimum,  $22^{\circ}$  at Amherst on the 31st; greatest local monthly range,  $57^{\circ}$  at Amherst; least local monthly range,  $45^{\circ}$  at New Bedford; greatest daily range,

42° at Concord on the 17th; least daily range, 4° at Fitchburg, Boston and Worcester on the 4th. Average temperature for October at Springfield for twenty-six years, 50.9°; average for October, 1893, 53.6°; departure, +2.7°. Average temperature for October at Boston for twenty-three years, 51.5°; average for October, 1893, 54.8; departure, +3.3°.

*Precipitation.* — Average, 3.94 inches; greatest, 5.16 at Springfield; least, 2.61 at New Bedford. Average for October at Springfield for forty-six years, 4.15; for October, 1893, 5.16; departure, +1.01. Average for October at Boston for twenty-three years, 4.06; for October, 1893, 2.94; departure, — 1.12.

*Prevailing Wind Direction.* — Southwest.

*Aurora.* — Concord, 2d, 11th.

*Lunar Halos.* — 20th, 22d.

The first general killing frost occurred on the morning of the 17th.

The temperature during the month was above the normal in all portions of the State. The frosts were not as severe as usual during October and held off remarkably; the first killing frost did not occur until the morning of the 17th. The precipitation was about normal or slightly above in western and central Massachusetts, but a deficiency has been generally reported throughout the eastern district. Wells and streams were very low during the first twenty days of the month, but the copious rains of the 23d, 24th, 27th and 28th relieved to some extent the drought. With one exception, the storms of the month were not severe, and were of short duration, as the number of rainy days will show. The storm of the 14th was accompanied by high southerly gales, but no great amount of damage was done. At Boston the wind attained a velocity of 49 miles from the south during that storm. The amount of cloudiness during the month was much below normal; sixteen days were practically cloudless at the Boston station.

#### CROPS OF THE YEAR.

June 1, most correspondents stated that the season was two weeks later than last year, but aside from its lateness it

was thought to compare favorably with former years. Stock generally wintered well. The bloom for apple trees appeared to be below the average, but other fruit trees and early berries had an unusually full bloom. Insects, particularly the tent-caterpillar, did not appear to be as numerous as usual. The average prices paid farm help appeared to be \$20 per month with board and \$35 per month without board, while for day help \$1.50 per day seemed to be the ruling price.

The first of July the acreage of Indian corn was reported as practically the same as in former years, and though backward it was of good color, and otherwise looking well. Haying had just begun and the crop did not promise to be more than an average because of drought in the early summer. Early potatoes had about the usual acreage and were generally reported to be looking well, though somewhat backward. Early market garden crops made average yields with good prices. Dairy products were about average in quantity, with perhaps a slight change for the better in price. Pastures were generally reported to be in good condition. The general outlook for fruits and berries seemed to be good, though there was much complaint of apples not being up to the average. No insects were reported as doing an unusual amount of damage.

Correspondents reported August 1 that there had been little serious damage to crops from insects during the month. Corn promised to be a good crop, for though late it was growing fast. On the whole, an average crop of hay was reported as secured in excellent condition, the weather having been favorable for harvesting and the quality first class. Early potatoes were a light crop, with the ruling price \$1 per bushel. Late potatoes promised well, but were badly in need of rain. Market garden crops were generally reported to be about average in yield and price, though Arlington reported small and inferior crops and low prices. Peaches promised well, pears fair and apples poorly. Berries generally yielded well. The majority of returns stated that pastures were suffering from drought, though the condition varied greatly in different localities. Rye was rather better than an average crop.



September 1, the damage from insects during August was reported to have been almost a minimum. Pasturage was below average condition, especially in the western portions of the State, owing to the long-continued drought. Rowen also suffered severely, the rains coming too late to help it materially. Early fruits, with the exception of apples, were a fair crop and late ones promised well until the severe storms of the latter part of August. Apples were a very short crop at best and at the close of the month appeared to be nearly a total failure. Potatoes suffered severely from drought and hardly promised an average crop. The yield of market garden crops was only fair, but later ones promised to be better. Corn was much damaged by the high winds and an average crop was scarcely expected. Barley and oats were full average crops, oats doing particularly well. Tobacco suffered severely from drought both in yield and quality, and it was thought that the crop would fall short of that of 1892 in all respects. In general the month was not a favorable one.

Indian corn was severely injured by the gales of August, and the returns of September 1 did not show over a three-fourths crop on the average. Rowen suffered severely from drought and was far from being an average crop, generally ranging from light to very light. Fall feed was much improved but was hardly in average condition. Fully the average amount of fall seeding had been done and was in good condition. Stable manure seemed to be the main reliance in fall seeding. Onions were hardly an average crop, having suffered from drought and the attacks of maggots. Potatoes, except in Barnstable County, were below an average yield, but the quality was generally reported good and only five complaints of rot were received. Root crops generally promised well, most correspondents speaking of the prospect as good or excellent. The apple crop was very light in all sections, and in many localities proved a total failure. The drop of the early season and the severe gales of August were the principal causes of failure. Cranberries were a full average crop, and possibly a little above average, the correspondent for Barnstable referring to the crop as the largest ever harvested.

In the circular to correspondents returnable to this office on or before October 30, the following questions were asked : —

1. Have root crops proved to be average crops?
2. What is the condition of farm stock?
3. Are concentrated commercial feed stuffs used in feeding dairy stock, and if so, in what forms and amounts?
4. What is the condition of fall seeding?
5. Which of the leading crops in your locality do you think have been most profitable?
6. Which of the leading crops in your locality do you think have been least profitable?
7. Considered as a whole, has the season been a profitable one for your farmers?

Returns were received from one hundred and eight correspondents, from which the following summary has been made : —

#### ROOT CROPS.

Of the one hundred and one correspondents answering the question in regard to root crops seventy-five report them as average or more than average, and twenty-six as less than average. In the eastern portions of the State and in Berkshire county the returns show an almost uniformly good condition, most of the complaints of poor crops coming from the Connecticut valley and from Worcester county.

#### FARM STOCK.

Farm stock is in nearly, though probably not quite, average condition. Nearly three-fourths of the correspondents speak of it as in either average, good, or excellent condition. Most of the complaints of poor condition and thinness of flesh come from the central and western sections of the State, owing doubtless to the greater severity of the drought in those sections, and also, perhaps, to the greater dependence placed on pasture feeding by the dairy farmers.

#### CONCENTRATED COMMERCIAL FEED STUFFS.

The returns would indicate that in all but a very few localities concentrated commercial feed stuffs are relied on to help out the fodder ration of the dairy stock. The general practice would seem to be to use corn meal, bran, shorts or middlings, or a combination of two or more of

these, in conjunction with cotton-seed meal, gluten meal, linseed meal or gluten feed. Of the more concentrated feeds cotton-seed meal seems to be the one in most common use, with gluten a close second. Other feeds mentioned are maize feed, fine feed, oil meal, rye feed, proteina, brewers grains and various fine and mixed feeds. The combinations and amounts used vary greatly, so much so that it is impossible to summarize from the information obtained.

#### FALL SEEDING.

Fall seeding may be said to be generally in good condition, most correspondents reporting it as either average, good or excellent, while the majority of the remainder speak of it as fair. Only a few call the condition poor.

#### MOST PROFITABLE CROPS.

As was to be expected, there was great diversity of opinion among the correspondents as to the most profitable crops. Fifty-seven considered hay to have been among the most profitable crops; thirty-five, potatoes; nineteen, corn; six, cabbages; four, onions; four, oats; three, rye; three, tobacco; two, barley; two, asparagus; two, early peas; two, cranberries; one, squash; one, turnips; and one cranberries.

#### LEAST PROFITABLE CROPS.

Thirty correspondents state that apples are among the least profitable crops; twenty-six, potatoes; twenty-five, corn; five, cranberries; four, tobacco; four, squashes; four, cabbages; three, onions; three, rowen; two, pears; two, beans; two, hay; one, cauliflower; and one, small grains.

#### PROFITS OF THE SEASON.

There is quite general complaint that the season has not been an average one for profit. The majority of correspondents report it to have been either a poor season or not up to the average. Very few speak of it as more than average. Much of this is due to the drought of the early season, which cut many crops short, and much to the slow sale of agricultural products. Cranberries, while a fine crop, have met with a poor sale and very many growers will barely cover expenses. Much the same condition prevails in regard to the sale of onions and tobacco.

## NOTES OF CORRESPONDENTS.

(Returned to us October 30.)

## BERKSHIRE COUNTY.

*Sheffield* (DWIGHT ANDREWS). — Root crops are average. Farm stock is looking well. Concentrated commercial feed stuffs are used in varying amounts in feeding dairy stock. Fall seeding is looking well. Hay and rye have been our most profitable crops and apples and buckwheat our least profitable ones. Farmers have no reason to complain of the season.

*Lee* (A. BRADLEY). — Farm stock is in first-class condition. Very little fall seeding has been done. The leading crops here are corn, grass, oats, potatoes, tobacco and cabbages, and all have been fair, though none phenomenal. The season has been fully an average one for farmers.

*Richmond* (O. F. SMITH). — Root crops are average. Farm stock is in fair condition. Concentrated commercial feed stuffs are used in feeding dairy stock, about two quarts per head night and morning. Fall seeding is in fair condition. Hay, oats and potatoes have been our most profitable crops and buckwheat has been our least profitable one. The season has been moderately profitable. There has been a shortage in most of our crops, caused by lack of moisture and destructive storms of wind and hail, but fair prices have been received.

*Windsor* (H. A. FORD). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used in feeding dairy stock to any great extent. Fall seeding is in good condition. Potatoes have been our most profitable crop. Considered as a whole the season has been a profitable one.

*Cheshire* (L. J. NORMAN). — Root crops are average. Farm stock is in good condition. Fall seeding is in good condition. Potatoes have been our most profitable crop and corn our least profitable one. On the whole farmers could not ask for a better season.

## FRANKLIN COUNTY.

*Buckland* (J. D. AVERY). — Root crops are not average, because of drought. Farm stock is in average condition. Cotton-seed meal and gluten are fed quite generally at the rate of two quarts per cow. Fall seeding is not average, owing to drought and grasshoppers. Hay has been our most profitable crop and corn our least profitable one. The past season has been the poorest in several years. Potatoes were a light crop and the apple crop the poorest in years.

*Colrain* (A. A. SMITH). — Root crops are average. Farm stock is in good condition. Fall seeding is in fine condition. Hay and corn have been our most profitable crops and potatoes and apples our least profitable ones. The season has not been a profitable one, for though the crops have been good, there are no purchasers.

*Shelburne* (R. H. CUSHMAN). — Root crops are not up to the average in yield. Cattle are in fair flesh in spite of the drought. Nearly all farmers feed cotton-seed meal, two quarts per day per cow being the average feed. Fall seeding is backward, but improving. Early potatoes sold readily and hay sells well. Corn is our least profitable crop, being below average in yield. The farmers' profits will not be as large as usual.

*Conway* (J. C. NEWHALL). — Potatoes are about an average crop. Stock is not in average condition, owing to the severe drought. Nearly all kinds of concentrated commercial feed stuffs are used here in varying mixtures and amounts. Fall seeding is looking very well. The season has hardly been an average one, as it has been hard to sell anything.

*Deerfield* (CHAS. JONES). — Root crops are average. Farm stock is in fair condition. Concentrated commercial feed stuffs are not much used. Fall seeding is in good condition. If tobacco sells well it will be our most profitable crop, having made a good growth, cured well and being free from pole sweat. Onions have been our least profitable crop. The season has been a fair one.

*Sunderland* (J. M. J. LEGATE). — Root crops are hardly average. Farm stock is in good condition. Cotton-seed meal, bran and some gluten are used in feeding dairy stock. Late seeding is looking well. Onions have been our most profitable crop and tobacco our least profitable one. The season has not been a profitable one for our farmers, as crops are not good, and there is no sale for them at a remunerative price.

*Montague* (C. S. RAYMOND). — Root crops are somewhat below average. Farm stock is not in as good condition as usual.

Cotton-seed and gluten meal and wheat bran, mixed with cob meal, are used for dairy stock. Fall seeding is a good average. Tobacco, corn and potatoes are our most profitable crops and onions our least profitable. On the whole the season has been a profitable one.

#### HAMPSHIRE COUNTY.

*Greenwich* (WILLIAM S. DOUGLAS). — Root crops are not up to the average. Farm stock is looking rather thin. Cotton-seed meal, bran and corn meal are used in feeding dairy stock. Fall seeding is in fair condition. Potatoes were our most profitable crop. The season has not been as profitable as usual.

*Pelham* (J. L. BREWER). — Root crops are fair, but not quite up to the average. Farm stock is looking well. Gluten meal is much used for milk production. Fall seeding has much improved of late. Potatoes have been our most profitable crop and corn and apples our least profitable ones. The season has not been as profitable as last year.

*North Hadley* (H. C. RUSSELL). — Root crops are average. Farm stock is thin in flesh. Cotton-seed meal, gluten meal and linseed meal are used for feeding dairy stock. Fall seeding is in good condition. Potatoes have been our most profitable crop and onions our least profitable one. On the whole the season has not been an average one.

*Southampton* (C. B. LYMAN). — Root crops are not average. Farm stock is not in as good condition as some years. Concentrated commercial feed stuffs are not used for dairy stock in any large amount. Hay, potatoes and corn are our most profitable crops and tobacco our least profitable one. Farmers' profits will be very small this year, the most of the profit coming from the dairy.

*Chesterfield* (HORATIO BISBEE). — Root crops are not average, because of dry weather. Farm stock is rather thin. One or two quarts of cotton-seed meal are used daily in connection with other feeds. Fall seeding is in good condition. Hay has been our most profitable crop and corn our least profitable one. The season has not been a profitable one.

*Goshen* (ALVAN BARRUS). — Root crops are average. Farm stock is in good average condition. Fall seeding is in fairly good condition. Hay and potatoes have been our most profitable crops and apples and corn our least profitable ones. There was no second crop of hay. On the whole the season has not been a profitable one for farmers.

## HAMPDEN COUNTY.

*Blandford* (E. W. BOISE).—Root crops are average, owing to the open fall. Farm stock is below average, owing to dry weather and worry from the horn fly. Fall seeding is in good condition. Grass has been our most profitable crop and potatoes our least profitable one. Dairy products also are not up to the average. The season has been a profitable one for hill farmers.

*Tolland* (F. T. MOORE).—Roots are about a three-fourths crop. Farm stock is not in as good flesh as usual. Corn meal and bran are about the only feeds used for dairy stock. Hay was a fair crop and corn a very poor one, as it did not ripen and fill out well. The season has not been up to the average. Help is very scarce and poor.

*West Springfield* (N. T. SMITH).—Root crops are not average on the whole, though some pieces are fine. Farm stock is in good condition. Wheat bran, middlings, rye feed, gluten meal, cotton-seed meal, and linseed meal are fed in large quantities to dairy stock. Fall seeding is below the average in condition. The first crop of grass was our most profitable crop and rowen our least profitable one. Late cabbage is a poor crop. The supply of milk is better than the price. The season has been fairly profitable, all things considered.

*Chicopee* (R. W. BEMIS).—Root crops are average. Farm stock is in fair condition. Fall seeding is late and much foul seed was mixed with the grass seed. Corn and potatoes have been our most profitable crops. Most of our farmers are engaged in market gardening and dairy farming and the season has been a profitable one.

*Wilbraham* (H. M. BLISS).—Root crops are a full average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used for dairy stock to any great extent. Fall seeding is in fair condition. Hay and vegetables have been our most profitable crops and corn our least profitable one. Considered as a whole the season has been a profitable one.

*Monson* (A. H. WHITE).—Root crops are about two-thirds of an average. Farm stock is looking fairly well, considering the drought. Cotton-seed meal, linseed and gluten are used in small quantities as feed for dairy stock. Fall seeding is looking fairly well. Potatoes have been our most profitable crop. The season has been a fair average with others.

## WORCESTER COUNTY.

*Dudley* (J. J. GILLES). — Root crops are average. Farm stock is in average condition. Fall seeding is in good condition. Late cabbage has been our most profitable crop and early cabbage our least profitable one. Considered as a whole the season has been a profitable one.

*Warren* (W. E. PATRICK). — Root crops are not over three-fourths of an average crop. Farm stock is thin in flesh. Concentrated commercial feed stuffs are not used much in feeding dairy stock. Fall seeding is in fine condition. Hay, oats, barley and rye have been our most profitable crops and corn, potatoes and apples our least profitable ones. The past season has been less profitable than any for a number of years.

*New Braintree* (C. D. SAGE). — Root crops have suffered for want of rain. Farm stock is not looking as well as usual, because of poor feed. Wheat bran, Chicago gluten and corn meal in equal parts give good satisfaction for dairy stock. Fall seeding is late, and but little has been done. Hay and oats have been our most profitable crops and potatoes and corn our least profitable ones. The season has not been an average one for profit.

*Petersham* (S. B. COOK). — Root crops are average. Farm stock is in good condition. Corn meal and bran are chiefly used for feeding dairy stock. Fall seeding is in very good condition. Hay has been our most profitable crop and apples and potatoes our least profitable ones. The season has been only moderately profitable. Light rains have been frequent, but not enough water has fallen to prevent many springs and wells from running low.

*Templeton* (LUCIEN GOVE). — Root crops are average. Farm stock is not in as good flesh as usual, owing to short feed in pastures. Corn meal, shorts, fine feed, gluten, cotton-seed meal, linseed meal and mixed feed are used in varying proportions in feeding dairy stock. Fall seeding is generally a good catch, but is in need of rain. Hay, corn and potatoes have been our most profitable crops and apples, pears and small grains our least profitable ones. As a whole the season has been a profitable one. Springs and streams are very low.

*Leominster* (W. B. HOSMER). — Root crops average. Farm stock is generally in good condition. Gluten meal, shorts and corn meal are mostly used in feeding dairy stock. Fall seeding is looking well. Hay has given us the best returns and the apple crop the poorest. Quinees are a good crop. The season has hardly been as profitable as usual.



*Lancaster* (S. C. DAMON). — Root crops are good average crops. Farm stock is in thrifty condition. Concentrated commercial feed stuffs are used in feeding dairy stock. Fall seeding is not in as good condition as it should be, on account of the drought. Hay has been our most profitable crop and potatoes our least profitable one. Considered as a whole the season has been a profitable one.

*Berlin* (P. B. SOUTHWICK). — Root crops are average. Farm stock does not look as well as usual. Very little concentrated commercial feed stuffs are used in this locality. Fall seeding is looking quite well. Hay has been our most profitable crop and apples and corn our least profitable ones. The season has been considerably below the average for profit.

*Holden* (G. S. GRAHAM). — Root crops are not quite average. Farm stock is not quite in average condition, owing to short pastures. Gluten meal, cotton-seed and maize feed are used for dairy stock in varying amounts. Fall seeding is hardly in average condition. Grass has been our most profitable crop and apples our least profitable one. Crops have been below average, but prices have been better, so the season may be considered an average one.

*Worcester* (S. A. BURGESS). — Root crops are not average. Farm stock is thin in flesh. Ten pounds of corn meal and shorts per cow are fed with corn stover and hay. Fall seeding is in average condition. Corn and hay have been our most profitable crops and apples our least profitable one. Pears and peaches were fair crops, and grapes above average. Farming has a little more than paid its expenses, but has fallen off in profit about 70 per cent from last year.

*Sutton* (O. P. JOHNSON). — Root crops are average. Farm stock is in splendid condition. Concentrated commercial feed stuffs are not used to any amount in feeding dairy stock. Fall seeding is in fine condition. Hay and milk have been our most profitable crops and apples and potatoes our least profitable ones. The season has been a fairly profitable one.

#### MIDDLESEX COUNTY.

*Hopkinton* (W. V. THOMPSON). — Root crops are average. Farm stock is in good condition. Cotton-seed meal, gluten, oil meal and bran are used in feeding farm stock. Fall seeding is in good condition. Ensilage, corn and cabbages have been our most profitable crops. Tomatoes and celery rusted somewhat, late barley was light, turnips are growing well, cabbages are heading well and corn a light yield. On the whole the season has been a profitable one.

*Framingham* (H. S. WHITEMORE). — Root crops are better than average. Stock is looking well, but most farmers have been obliged to feed in the barn. Gluten meal, cotton-seed meal and some oil meal are used for feeding dairy stock, besides corn meal, middlings, etc. Fall seeding is looking finely. Hay has been our most profitable crop and potatoes our least profitable one. Crops have been fair and sold at good prices, so the season has been a profitable one.

*Littleton* (G. W. SANDERSON). — Root crops are average. Farm stock is in good condition. Gluten meal, shorts and corn meal mixed are used in feeding dairy stock, about six to eight quarts per cow per day. Fall seeding is well advanced. Hay and corn have been our most profitable crops and potatoes our least profitable one. Considered as a whole the season has not been a profitable one.

*Chelmsford* (P. P. PERHAM). — Root crops are extra good. Farm stock is in good condition. Chicago gluten, corn meal and wheat bran, in equal parts, at the rate of six quarts per day, are used here with good results. Fall seeding is doing well. Hay has been our most profitable crop and apples our least profitable one. As a whole the season has been a profitable one.

*Wilmington* (C. W. SWAIN). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are used to some extent in feeding dairy stock. Fall seeding was never in better condition. Grass, corn and cranberries have been our most profitable crops and potatoes, squashes and winter apples our least profitable ones. Considered as a whole the season has been a profitable one. The fruit crop, with the exception of apples, has been fairly good.

*Woburn* (W. H. BARTLETT). — Root crops are doing well considering the dry weather. Farm stock is looking well. Concentrated commercial feed stuffs are more than ever used in feeding dairy stock, gluten meal being now used instead of linseed. Rye is coming up well since the last rain. Asparagus and early peas have been our most profitable crops and beans and potatoes our least profitable ones. The season has been fairly profitable, there having been good crops generally and good prices.

*Weston* (H. L. BROWN). — Root crops, with the exception of turnips, are average. Farm stock is in good condition. Shorts, gluten meal, cotton-seed meal and corn meal are the principal grain feeds, from two to eight quarts. Early seeding is looking well. Hay and sweet corn have been our most profitable crops and squash, late cabbage and cauliflower have been our least profitable ones. Farmers have lived, but most of them have not made much profit.

## ESSEX COUNTY.

*Haverhill* (EBEN WEBSTER). — Root crops are about average. Farm stock is in excellent condition. Cotton-seed meal, gluten meal, gluten feed, shorts and corn meal are used in feeding dairy stock. Fall seeding is in very good condition. Our leading crops are all fed to make milk, so it is hard to tell which is the most profitable. The season has not been quite an average one for profit.

*West Newbury* (J. C. TARLETON.) — Root crops are average. Farm stock is in very good condition. Not much concentrated commercial feed stuffs are used, as the price of milk is not high enough. Fall seeding is in very good condition. Hay and corn are our most profitable crops and potatoes our least profitable one. The season has not been as profitable as usual.

*Newbury* (G. W. ADAMS). — Root crops are average. Farm stock is in fair condition only. Gluten meal with a little cotton-seed is used considerably for farm stock. Fall seeding is rather backward. Onions and potatoes are our most profitable crops and apples our least profitable one. The season has been fairly profitable and would have been more than average if sales had been as good as usual.

*Ipswich* (O. C. SMITH). — Root crops are generally an average. Farm stock is in good condition. Wheat bran, corn meal, cotton-seed meal, gluten meal, germ meal, proteina, etc., are all fed in various mixtures and amounts. Fall seeding is in fair average condition. Hay has been our most profitable crop and potatoes and apples our least profitable ones. The season has not been as profitable as was expected, but is not so bad as to be discouraging.

*Marblehead* (W. S. PHILLIPS, Jr.). — Root crops are average. Farm stock is in excellent condition. Cotton-seed meal and Chicago gluten are used for dairy stock, but not largely. Fall seeding is in very good condition. Squash has been our most profitable crop and potatoes our least profitable one. On the whole the season has not been quite an average one.

## NORFOLK COUNTY.

*Cohasset* (E. E. ELLMS). — Root crops have been average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used in feeding farm stock. Fall seeding is in good condition. Hay has been our most profitable crop and potatoes our least profitable one. Considered as a whole the season has been a profitable one.

*Medway* (MONROE MORSE). — Root crops have been full average crops. Farm stock is about in average condition. Cotton-seed meal and gluten meal are considerably used in feeding dairy stock, at the rate of from two to four pounds per day per head. Fall seeding is in very good condition. Hay has been our best crop. This has been only a living year, not a profitable one.

#### BRISTOL COUNTY.

*Attleborough* (ISAAC ALGER). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are used for dairy stock in many different ways. Fall seeding is in very good condition. Apples have been our least profitable crop. The season has been fairly profitable.

*Taunton* (C. H. WILMARTH). — Root crops are average. Farm stock is in good condition. Fall seeding is in good condition. Corn and cranberries have been our most profitable crops and fruits, especially pears and apples, our least profitable ones. The season has been below the average for profit, on account of the dry weather. Rain is much needed.

*Raynham* (N. W. SHAW). — Root crops are average. Farm stock is not up to the average in condition. A little cotton-seed meal is used in feeding farm stock, but concentrated commercial feed stuffs are generally little used. Fall seeding is much above the average in condition. Hay has been our most profitable crop and corn and potatoes our least profitable ones. Considered as a whole the season has not been a profitable one.

*Dighton* (A. W. PAUL). — Root crops are average. Farm stock is in good condition. Corn meal, shorts and cotton-seed meal are used for dairy stock in quite large quantities. Fall seeding is in unusually good condition. Potatoes have been our most profitable crop and apples our least profitable one. The season has been fairly profitable.

*Swansey* (F. G. ARNOLD). — Beets are a good crop, but turnips are a lighter crop than last year. Farm stock is in good condition. Gluten meal and cotton-seed meal are used for feeding dairy stock at the rate of two quarts of each per day. Fall seeding is in very good condition. Potatoes and strawberries have been our most profitable crops. On the whole the season has been a profitable one.

*Dartmouth* (L. T. DAVIS). — Root crops are very good, though not quite so good as they would have been with more rain. Farm stock is in fine condition. Corn meal and shorts with some cotton-seed and linseed meal are mostly used in feeding dairy stock. Fall seeding is in extra good condition. Forage crops have been our most profitable crops and potatoes our least profitable one.

## PLYMOUTH COUNTY.

*West Bridgewater* (F. E. HOWARD). — Root crops a fair average. Farm stock is in first-rate condition. Concentrated commercial feed stuffs are used in feeding farm stock in varying amounts. Fall seeding is in good condition. Hay has been our most profitable crop and apples our least profitable one. I should say that the season had not been an average one.

*Marshfield* (G. J. PETERSON). — Roots are more than average crops. Farm stock is looking well. Corn meal, bran and shorts are the principal grain rations. Fall seeding is in average condition. Corn, potatoes, turnips and cabbages have been our most profitable crops and rowen has been the least profitable. Celery has much improved during the past month. On the whole the season has been a profitable one.

*Halifax* (G. W. HAYWARD). — Root crops are a full average. Farm stock is looking well. Very little concentrated commercial feed stuffs are used except corn meal and shorts. Fall seeding is looking well. Hay has been our most profitable crop and potatoes were our least profitable one. The season has been a fairly profitable one.

*Kingston* (J. H. CUSHMAN). — Root crops are very good. Farm stock is looking well. Most dairy stock is fed chiefly on fine feed, in varying amounts. Fall seeding is looking fairly well. Hay has been our most profitable crop and apples our least profitable one. The season has been about an average one for farmers.

*Middleborough* (C. E. WESTON). — Root crops are average. Farm stock is in fair condition. Fall feed is very good indeed, owing to the lateness of the frosts, and this has greatly helped the stock. Fodder is better than usual for the same reason. Corn and potatoes have been our most profitable crops and beans our least profitable one. On the whole the season has been a profitable one.

*Wareham* (A. SAVARY). — Root crops are hardly average. Farm stock is in very good condition. Fine feed, shorts, bran, cotton-seed meal and gluten meal are used in feeding dairy stock. Fall seeding is in very good condition. Hay has been our most profitable crop and potatoes our least profitable one. The season has been fairly profitable where too much help was not hired.

## BARNSTABLE COUNTY.

*Mashpee* (W. F. HAMMOND). — Root crops have been average. Farm stock is in very good condition. Concentrated commercial

feed stuffs are not used in feeding dairy stock. Fall seeding looks quite well. Hay has been our most profitable crop and corn our least profitable one. Farmers have come out about square this season.

*Sandwich* (J. R. HOLWAY). — Root crops are average. Farm stock is in good condition. Fall seeding is in very good condition. Potatoes and hay have been our most profitable crops and cranberries our least profitable one. Considered as a whole the season has been fairly profitable.

*Dennis* (JOSHUA CROWELL). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used to any great extent in feeding dairy stock. Fall seeding is in fair condition. The season has not been a very profitable one. The cranberry crop has been very large, but prices have ruled very low, in many instances barely paying expenses. This is likely to prove the worst season ever experienced in the cranberry business.

*Brewster* (J. H. CLARK). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used in feeding dairy stock. Fall seeding is in good condition. Potatoes have been our most profitable crop and cranberries our least profitable one. On the whole the season has been fairly profitable.

*Eastham* (J. A. CLARK). — Root crops will be a full average. Farm stock is in good condition. Shorts, corn meal and cotton-seed oil meal are used in feeding dairy stock. The leading crops in this town are asparagus and for a late crop white Cape turnips. The first was fairly profitable and the last is usually so. The season has been fairly profitable and perhaps rather above average.

#### DUKES COUNTY.

*West Tisbury* (WM. J. ROTCH). — Root crops are average. Farm stock is in good condition. Concentrated commercial feed stuffs are not used to any great extent. Fall seeding is in fair condition. Potatoes have been our most profitable crop and corn our least profitable one. The season has hardly been an average one.

#### NANTUCKET COUNTY.

*Nantucket* (CHAS. W. GARDNER). — Root crops are not generally up to the average. Farm stock is in very good condition. Corn meal, shorts and some cotton-seed meal are used in feeding dairy stock. Corn has been our most profitable crop and potatoes our least profitable one. The season has not been profitable on account of the drought and the slow sale of produce.













